NEW EQUIPMENT DIGEST

A Penton Publication

July, 1961

Volume 26 — Number 7

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CHECK AND PASS ALONG

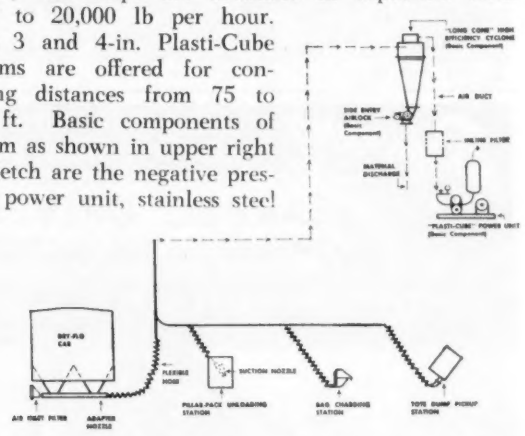
✓	NAME	See No.

Use Inquiry Slips—Pages 8 and 80

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

PNEUMATIC HANDLING SYSTEM
for plastic cubes, pellets, chips

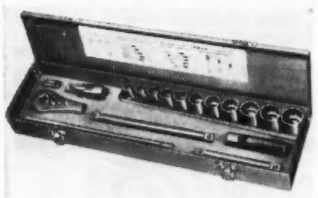
Pre-engineered negative pressure Trans-Vair pneumatic systems for handling plastic cubes, prills, dice, pellets, and chips are available in capacities from 3000 to 20,000 lb per hour. Both 3 and 4-in. Plasti-Cube systems are offered for conveying distances from 75 to 250 ft. Basic components of system as shown in upper right of sketch are the negative pressure power unit, stainless steel



rotary air lock, and stainless cyclone collector. Blower capacities range from 7½ to 40 hp. Items shown in lower half of sketch indicate how system can be used. • **Young Machinery Co.**, Muncy, Pa.

▲ For more details circle **NED-1 G1** on enclosed inquiry slip ▲

SOCKET WRENCH SET
11 sockets range from ⅜ to 1 in.

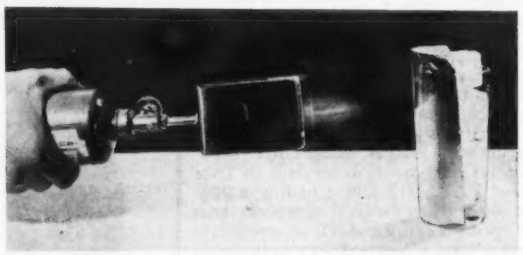


Versatility of a set twice its size is afforded by the Combo socket wrench set which has eleven sockets ranging from ⅜ to 1 in. by 16ths. With only seven basic driver parts, mechanic can make hundreds of different drive combinations, from a flexible ratchet head to a sliding T-bar. Sockets, cold impact extruded to close tolerances, exhibit high strength and concentricity. Set sells for $30. • **J. H. Williams & Co.**, 400 Vulcan St., Buffalo 7, N. Y.

▲ For more details circle **NED-2 G1** on enclosed inquiry slip ▲

HEAT REFLECTING TAPE
reflects high radiant heat

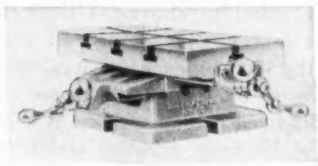
A laminate of aluminum foil and glass cloth with a pressure-sensitive silicone adhesive, PD-455 heat reflecting tape will withstand extremely high radiant



heat temperatures. It is light in weight, and exhibits good conformability and resistance to abrasion, chemicals, and aging. Tape has been used as a heat shield to protect missile components from blast-off heat reaching 5000° F and for shielding wiring harnesses in flight. Picture shows ice cubes in a tumbler protected by the tape from heat of a propane torch without melting. • **Mystik Adhesive Products, Inc.**, Industrial Div., 2635 N. Kildare Ave., Chicago 39, Ill.

▲ For more details circle **NED-3 G1** on enclosed inquiry slip ▲

ADJUSTABLE MILLING TABLE
permits milling on drill presses



Accurate milling on drill presses is possible by using this Palmgren No. 85 dual cross-slide table. Furnished with a 10 x 6 or 12 x 6-in. table top surface, it has one longitudinal T-slot and three equally spaced cross slots. Transverse travel is 4½ in., and longitudinal travel is 6 in. Dials are graduated in 0.001-in. The square base has four mounting lugs and ⅝-in. keys and keyways for machine slot mounting. • **Chicago Tool & Engineering Co.**, Palmgren Steel Products, 8383 S. Chicago Ave., Chicago 17, Ill.

▲ For more details circle **NED-4 G1** on enclosed inquiry slip ▲

EPOXY ADHESIVE
has 3000-psi tensile shear strength

Continuous peel strength of over 40 psi and initial breakaway strength in excess of 100 psi are produced with Tygoweld 34, a two-part, 100 per cent solids epoxy adhesive which uses Activator 48. Tensile shear property is in the 3000 psi range. These strengths are obtained on aluminum-to-aluminum bonds using simple cleaning processes. Curing may be done at ambient temperatures or accelerated at elevated temperatures. Adhesive was developed for use on structural panel applications, but has other applications in oil pipe lines, aluminum boat construction, truck and trailer panel bonding, and structural building frames. • **United States Stoneware Co.**, Adhesives Div., Box 624, Stow, Ohio.

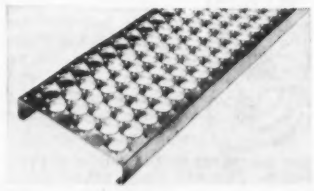
▲ For more details circle **NED-5 G1** on enclosed inquiry slip ▲

TORQUE WRENCH
"remembers" peak reading

Constant watch of the indicator scale of this torque wrench is unnecessary when making mechanical checks of stress, strain, thrust, tension, and compression. A memory pointer remains at the peak torque exerted. It can be used for destructive tests as well as normal applications without damage to indicating or memory elements. Tool is made in torque ranges from 0 to 32 oz-in. to 0 to 300 lb-ft. • **P. A. Sturtevant Co.**, Addison, Ill.

▲ For more details circle **NED-6 G1** on enclosed inquiry slip ▲

STEEL SAFETY GRATING
debossed holes give large open area



Debossed circular holes in Open-Grip steel safety grating provide a large open area to minimize accumulation of mud, snow, or ice. The one-piece grating also has upset perforated buttons for antiskid footing. As buttons wear, new gripping edges are formed. Grating is installed with simple anchor bolts, and can be welded directly to supporting section. It is offered in 10-ft lengths in 5, 8½, and 12-in. widths and in 1½ and 2-in. channel heights. • **Morton Mfg. Co.**, 5125 W. Lake St., Chicago 44, Ill.

▲ For more details circle **NED-7 G1** on enclosed inquiry slip ▲

DIP TANKS
for hot melt plastic coatings

Adjustable thermostatic controls built into a line of circular and rectangular dip tanks allow automatically controlled, uniform working temperatures to prevent burning. Designed for use with strippable Dip-Pak hot melt plastic coating and similar materials, they are air-insulated and have cast aluminum construction. Circular tanks are made in 1-pt to 5-gal capacities, and rectangular units in 0.1 to 3-gal sizes. • **Fidelity Chemical Products Corp.**, 470 Frelinghuysen Ave., Newark 12, N. J.

▲ For more details circle **NED-8 G1** on enclosed inquiry slip ▲

ELECTRIC STEAM BOILER
rated to ½ bhp, 5 kw, 15 psi

Compact simplicity, plug-in utility, and built-in protection from low water or dry boiler damage are afforded in Model RPL Speedylectric small electrode steam boiler. Unit can be safely used in dust or explosive fume atmospheres. Electric input is automatically regulated to balance steam output at desired preset pressure. The low pressure (0 to 15 psi) unit is useful where limited quantities of steam are needed up to ⅓ bhp (3.3 kw) on 110-120 v ac and to ½ bhp (5 kw) on 220-240 v single-phase ac. Price is $225. • **Pantex Mfg. Corp.**, Box 660, Pawtucket, R. I.

▲ For more details circle **NED-9 G1** on enclosed inquiry slip ▲

ALLOY STEEL SHAPES
in several high strength compositions

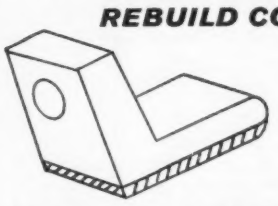
Standard I-beams, channels, and angles, and lengths up to 40 ft are available in quenched and tempered alloy steels to make possible weight and cost savings in many structural applications. T-1 and T-1 Type A constructional alloy steels, 9 per cent nickel steel for cryogenic applications at temperatures as low as −320° F, and HY-80 naval armor steel are offered. T-1 steel has a minimum yield strength of 100,000 psi, about three times that of structural carbon steel. American Standard I-beams range in size from 12 in. deep by 3¼ in. wide to 6 x 3⅜ in. Channels range from 15 x 3⅜ in. to 6 x 2 in. Equal-angle shapes from 3 x 3 in. to 8 x 8 in. have respective thicknesses from 3/16 to ½ in. and ½ to 1⅛ in. Unequal angles range from 3½ x 3 in. to 8 x 6 in. in various thicknesses. • **United States Steel Corp.**, 525 William Penn Place, Pittsburgh 30, Pa.

▲ For more details circle **NED-10 G1** on enclosed inquiry slip ▲

ELIMINATE—

- *Contact Inspection and Dressing*
- *Hard-to-find Contact Failure*

REBUILD COPPER CONTACTS



with a silver-bearing facing

Silver facing also can restore to use contacts no longer available.

Rebuilt copper contacts with silver bearing facing benefit users in many ways. Down time due to contact failure is virtually unheard of. One silver faced contact gives the service of several new copper ones. Maintenance expense is reduced. Dependable service is assured. Wherever pitting, metal transfer, or failures occur with heavy electrical current, silver facing on contacts should be investigated.

SUPERIOR CARBON PRODUCTS, INC.
9115 George Avenue—Cleveland 5, Ohio

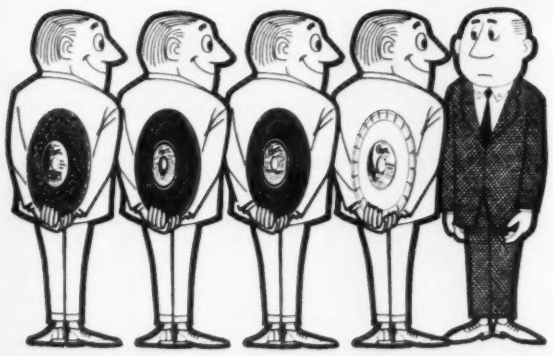
SCP SUPERIOR CARBON BRUSHES "Since 1919"

Send a worn contact for quotation.

Also ask for folder E.

▲ For more details circle **NED-11 G1** on enclosed inquiry slip ▲

Ever Wonder Why 4 out of 5 Choose Clipper Blades?



It's no accident that the great majority choose Clipper blades for cutting masonry and concrete products of all types. Not when you consider that Clipper blades can cut your sawing costs as much as 30%. There's a Clipper factory representative near you. Let him show you how Clipper Diamond, Blue Bond Break-Resistant and Abrasive Blades can put extra dollars of profit in your pocket on every job. Ask too, how it's possible to get 32.7% greater blade life with the famous 14" Clipper SuperMatic Masonry Saw.

Clipper "SAILS RIGHT THRU" ®

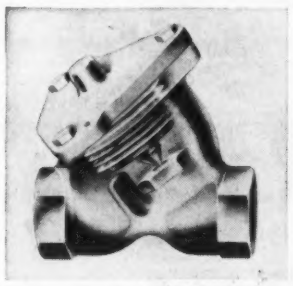
MANUFACTURING CO.
2800 Warwick, Kansas City 8, Mo.

FACTORIES: AUSTRALIA, ENGLAND, FRANCE, GERMANY, ITALY

262X

▲ For more details circle **NED-12 G1** on enclosed inquiry slip ▲

THERMOSTATIC STEAM TRAP
in 1/2 and 3/4-in. sizes



Designed primarily for tracer lines and small steam processing equipment, this N-150 thermostatic steam trap withstands pressures from vacuum to 150 psi, and temperatures to 425° F. Unit has a cast steel body, forged steel cover, Monel metal bellows, and hardened stainless steel lapped valve and seat. Steam-saving baffle deflects live steam upward to envelop the bellows, resulting in fast, snap-close action. Trap can be installed horizontally or vertically, and is freeze-proof in latter position. It can be inspected without breaking pipe connections. **W. H. Nicholson & Co.,** 12 Oregon St., Wilkes-Barre, Pa.

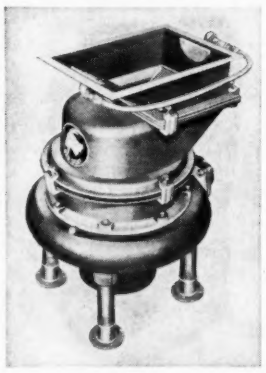
▲ For more details circle **NED-13 G1** on enclosed inquiry slip ▲

REINFORCED GRINDING WHEEL
for weld grinding, light snagging

Combining the advantages of a saucer-shaped wheel with the convenience of a throw-away mount, Cut-N-Saucer reinforced grinding wheel is suited for weld grinding and light snagging. Wheels are made in 7 and 9-in. sizes to fit standard threaded spindles of portable grinding equipment. The permanently attached Dis-Card mount allows it to be installed in seconds without need for a separate mounting pad. ● **Norton Co.,** Worcester 6, Mass.

▲ For more details circle **NED-14 G1** on enclosed inquiry slip ▲

WASTE DISPOSER
5-hp model added to line



Large capacity, high speed Red Goat food waste disposer for multi-operator use has a wide opening, rectangular stainless steel hopper for welding to a stainless steel sink or table. The 5-hp unit is also available with a rectangular aluminum hopper for free standing or non-welded undertable installation. Both models are equipped with a 15-in. disintegrating turntable and have 7½, 10, and 15-hp motors as options. ● **Colerain Metal Products Co.,** 2021 Eastern Ave., Cincinnati 2, Ohio.

▲ For more details circle **NED-15 G1** on enclosed inquiry slip ▲

GIANT WAR SURPLUS
INDUSTRIAL MAGNET MIDGET PRICE!

ALNICO V—lifts over 125 lbs.
101 Uses:
over $40.00 Value

$9.95 POSTPAID

Now you can easily recover tools from dip or coolant tanks, hold work in place for drill press or grinding operations, hold models in place on layouts, and use to hold steel parts in place for welding, soldering, on gauging and aligning racks. Oil drillers can use to retrieve broken drill heads from partially completed wells. Also the perfect answer to cleaning shop floors of metal fragments, pins, etc. without taking up dirt.

Use this horseshoe-shape, 5-lb. war surplus Alnico V type Magnet—tremendous lifting power, over 125 lbs. Rated at 2,000 Gauss. Lots of fun, too—use for "fishing" the bottoms of lakes, rivers, ocean, etc. —retrieve motors, fishing tackle, metal valuables.

Stock No. 70,183-AE 5-lb. size ..... $9.95 Postpaid
Stock No. 70,416-AE 3½ lb. size ..... $7.95 Postpaid
OTHER SIZES AVAILABLE ON REQUEST

Order by Stock No.—Check, M.O. or Open Account—Money-back Guarantee

FREE! GIANT 144-Page CATALOG "AE"

OVER 1,000 SCIENCE-MATH-OPTICAL ITEMS for industry . . . Many on-the-job helps . . . quality control aids! 144 pages—hundreds of illustrations. Many war surplus bargains! Imported instruments! Lenses, Prisms, Magnifiers, Telescopes, Satellite Scopes, Microscopes, Binoculars, etc. Optics for industry, research labs, experimenters, hobbyists, math learning aids. Write for FREE Catalog AE.

EDMUND SCIENTIFIC CO., Barrington, N. J.

▲ For more details circle **NED-16 G1** on enclosed inquiry slip ▲

CURVED PLYWOOD?

Made to specification
High-Frequency bonding on low cost forms

Tell us your problem—we'll solve it to your specifications. We manufacture unusual plywood shapes for applications ranging from church pews to water skis . . . table legs to torpedo cradles. Our high-frequency presses mass-produce curved parts fast and at lower cost than other methods, and with greater stability. We have over 200 stock dies available for stock shapes. Write, wire or phone RI 2-2474 for quotations and complete engineering service.

PLY-CURVES INC.

1615 Monroe Avenue, N.W., Grand Rapids 5, Michigan

▲ For more details circle **NED-17 G1** on enclosed inquiry slip ▲

Browning **GEARBELT DRIVES**

COMBINE THE POSITIVE ACTION OF GEARS WITH THE FLEXIBILITY OF BELTS

NEW

Here is a versatile new drive that provides high mechanical efficiency, *plus* the inherent flexibility of belts. In scores of applications, Browning Gearbelt Drives offer you many cost-saving advantages: 1) A positive non-slip drive. 2) Steel cable strength member won't stretch, needs minimum take-up. 3) Lower initial belt tension reduces bearing loads, prolongs life. 4) Permits smaller pulleys, shorter centers, narrower belts . . . higher capacity in limited space. 5) Lessens noise and heat. 6) Requires little maintenance, no lubrication. *Investigate new Gearbelt Drives today.* Ask your Browning Distributor for complete information and Catalog GB-201, or write **Browning Manufacturing Company, Maysville, Kentucky.**

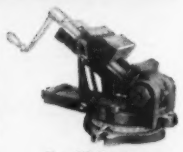
Browning . . . . OUR 75th YEAR

▲ For more details circle **NED-18 G1** on enclosed inquiry slip ▲

Write Now for This FREE CATALOG #208

on Work Holding Tools For Production, Tooling, Maintenance

Drill press vises, angle vises, swivel machine vises, rotary tables, lathe milling attachments, production vises, heavy duty angle vises and adjustable angle plates are illustrated and fully described in this new PALMGREN Catalog #208. It shows the *ONLY* complete line of work holding devices available anywhere. Designed for production, tooling and maintenance work, it shows over 70 different models and types, with jaw sizes from 1½" to 8". Ask for your FREE copy of this catalog today, it shows the complete line and prices.



No. 28 Heavy duty 4" Angle Vise

No. 84, 8" Rotary Table

137

PALMGREN PRODUCTS
8378 SOUTH CHICAGO AVE. • CHICAGO 17, ILLINOIS

▲ For more details circle **NED-19 G1** on enclosed inquiry slip ▲

TubeXperience in Action

FREE!

DATA MEMORANDUM #9

Covers standard gages and tolerances of Type 304 Stainless Hypoflex® Needle Tubing

Excellent mechanical properties up to 650°F, good corrosion resistance, strict dimensional tolerances, and exceptional cleanliness make Superior Hypoflex tubing ideal for many mechanical applications.

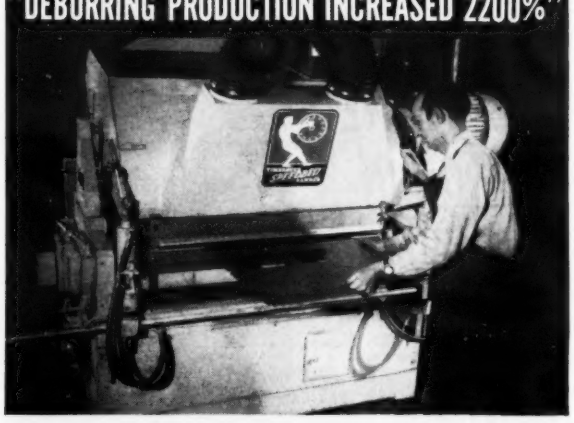
Superior Hypoflex is available in 28 standard sizes and gages from 6 to 33, in random straight lengths from 2 to 12 ft. and also in precise cut lengths. Hypoflex is special hard drawn, however, needle sizes can be produced in other tempers such as full hard, half hard, ¼ hard and fully annealed. Usual analysis is Type 304 stainless, but tubing from other materials can be supplied. Superior Tube Company, 2018 Germantown Ave., Norristown, Pa.

Superior Tube
The big name in small tubing
NORRISTOWN, PA.

All analyses .010 in. to ⅝ in. OD—certain analyses in light walls up to 2½ in. OD
West Coast: Pacific Tube Co., Los Angeles, Calif. • FIRST STEEL TUBE MILL IN THE WEST

▲ For more details circle NED-20 G1 on enclosed inquiry slip ▲

"DEBURRING PRODUCTION INCREASED 2200%"



Here's how a TIMESAVERS SPEEDBELT® SANDER helped AMF reduce costs!

TIMESAVERS SANDERS, INC.
Dept. P-1, 5270 HANSON CT.
MINNEAPOLIS 22, MINN.

Timesaver "Speedbelt" Sanders are manufactured under one or more of the following U. S. Patents: 2,813,352; 2,860,454; 2,876,600; 2,934,863; 2,958,989 with other patents pending.

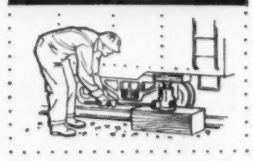
AMERICAN MACHINE & FOUNDRY'S Brooklyn, N. Y. plant manufactures many types of sheet metal components for AMF Pinspotters and other AMF machines. Steel plate deburring and cleaning operations are now completed *22 times faster* since installing a Timesaver Model TOP-40.

Unit production time on large 30" x 48" metal cabinet parts has been cut from 9½ minutes to 26 seconds. The *Speedbelt* also produces superior finishes for plating and painting. Result: a substantial saving in time, materials and manpower.

Investigate the advantages of Timesaver wide abrasive belt finishing and deburring for your plant. Write today for fact sheet and prices.

▲ For more details circle NED-21 G1 on enclosed inquiry slip ▲

200,000 Pounds Of Lifting Power In a 98 Pound Package



The 100 ton capacity Duff-Norton Aluminum Screw Jack weighs only 98 pounds. It is easier to handle and spot than any other type of jack of the same capacity.

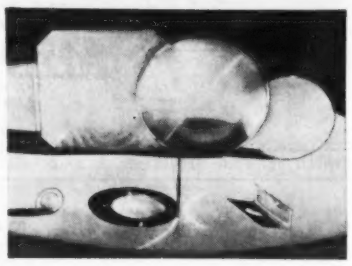
Maintenance is virtually eliminated by the rugged construction—aluminum alloy housing and base—heat-treated steel lifting screw—sealed-in lifetime lubrication. These jacks withstand hard usage in any weather. It is impossible for them to creep—will support load indefinitely. They can be used in any position—have no fluid to leak—no air to lock.

Duff-Norton Screw Jacks are available in 25, 35, 50 and 100 ton capacities in aluminum—in 15, 25, 35 and 50 ton capacities in malleable iron. For details ask your distributor or write for Bulletin AD-12N.

DUFF-NORTON COMPANY
Four Gateway Center • Pittsburgh 22, Pa.

▲ For more details circle NED-22 G1 on enclosed inquiry slip ▲

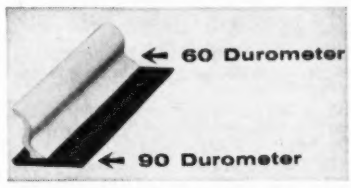
PLASTIC OPTICAL LENSES have prism-shaped grooves in surface



These Frenelenses are thin, flat sheets of transparent plastic which are suited for a wide range of optical applications. In appearance they resemble clear phonograph records with prism-shaped grooves extending from the center to the outside. Each groove is a minute refracting facet in the form of a circular prism, forming a multitude of microscopic optical elements capable of bending light in various ways. They are usable in projectors, cameras, shadographs, screens, and as magnifiers. • **Stocker & Yale, Inc.,** 349 Green St., Marblehead, Mass.

▲ For more details circle NED-23 G1 on enclosed inquiry slip ▲

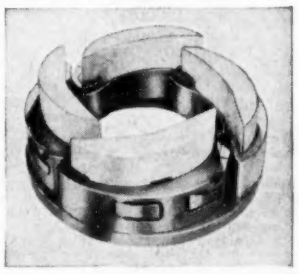
RUBBER EXTRUSIONS have two different hardnesses



Longitudinal sections of two different durometer hardnesses are combined in one-piece rubber extrusions, suited for refrigeration equipment, door seals, weatherstripping, and moldings. Soft rubber of desired profile is utilized for sealing and the hard foot mounts on an adjoining surface. Available in color combinations, the seals have beveled mating edges on the facing base or foot sections. Clips may be prestaked into the hard portion to minimize application time. Sample section is available. • **Geauga Industries Co.,** Middlefield, Ohio.

▲ For more details circle NED-24 G1 on enclosed inquiry slip ▲

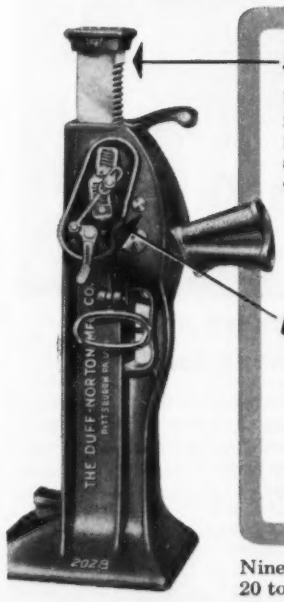
CHUCK-SEGMENT COMBINATION saves grinding time, abrasive costs



Standard diameters from 9 to 60 in. are available in the improved FM-AA chuck and segment combination which features a staggered, overlapping segment arrangement. Together with the segment design, considerable savings in both grinding time and abrasive costs are reported. Chips and grinding residue are cleared away from the work automatically. Body clamp design permits the use of one standard segment shape, regardless of chuck size, to cover most vertical spindle surface grinding and horizontal spindle face grinding requirements. • **Fuller Merriam Co.,** Water Street, West Haven, Conn.

▲ For more details circle NED-25 G1 on enclosed inquiry slip ▲

Duff-Norton Ratchet Jacks *are safer...last longer*



safer...

because the forged steel rack bar on Duff-Norton ratchet jacks is larger and stronger than the rack bar on any other make. Also, these jacks can not trip under load which guards men and equipment.

last longer...

because the exclusive spring mechanism makes maintenance easy. It can be adjusted, repaired or replaced without taking the jack apart. Tension can be tightened by the turn of a screw.

Nine models—capacities from 5 to 20 tons. Ask your distributor.

DUFF-NORTON COMPANY
Four Gateway Center • Pittsburgh 22, Pa.

▲ For more details circle NED-26 G1 on enclosed inquiry slip ▲

BAKER Gas Fork Trucks

Capacities range through 7,000 lbs.

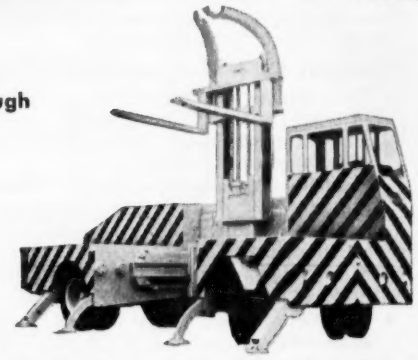
Write for illustrated manual on fork truck safety operating hints

Extremely maneuverable, easy-to-operate trucks. Standard full capacity lifts up to 144". Higher lifts available. Pneumatic-tire models for rugged indoor-outdoor work. *Call your BAKER Industrial Trucks Representative for information on "a complete line for every handling need".*

OTIS ELEVATOR COMPANY
Baker Industrial Trucks Division
8045 BAKER AVENUE
CLEVELAND 2
OHIO

▲ For more details circle NED-27 G1 on enclosed inquiry slip ▲

BAKER *Traveloader*®



Capacities 10,000 through 30,000 lbs.

Write for BAKER application story BAS-613

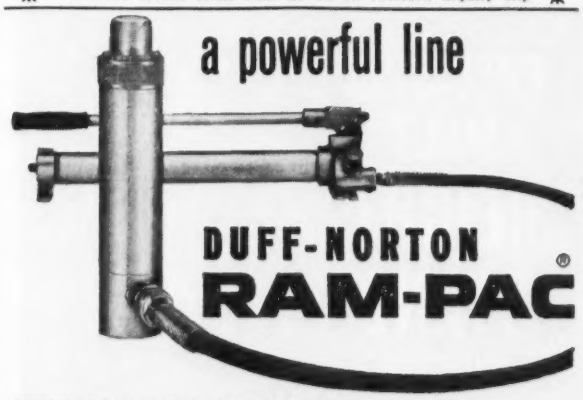
Handles loads of almost any length and stacks capacity loads to maximum heights from narrow aisles. Gas, LP gas or diesel powered. Pneumatic tires. *Call your BAKER Industrial Trucks Representative for information on "a complete line for every handling need".*

OTIS ELEVATOR COMPANY
Baker Industrial Trucks Division
8045 BAKER AVENUE
CLEVELAND 2
OHIO

B1-61

▲ For more details circle NED-28 G1 on enclosed inquiry slip ▲

a powerful line



DUFF-NORTON RAM-PAC®

HYDRAULIC RAMS AND PUMPS
12 RAMS, 5 PUMPS, CAPACITIES 10 TO 100 TONS

The complete Duff-Norton Ram-Pac line gives you the power source you want—where you want it and with little effort. The 12 rams may be used with 5 hand or power pumps to apply from 10 to 100 tons of force in any direction in either portable or permanent applications. For information on this line of rams, pumps, attachment units, accessories and fittings ask your distributor or write for Bulletin AD-90-N.

DUFF-NORTON JACKS
DUFF-NORTON COMPANY
Four Gateway Center, Pittsburgh 22, Pa.

▲ For more details circle NED-29 G1 on enclosed inquiry slip ▲

NEW...from RCA The best designed AIR GAGE ever offered!

No other air gage on the market can match the ease and compactness with which these RCA units can be grouped into multiple systems . . . expanded at will at minimum cost. Their attractive functional design with this built-in expansion feature is certain to be a welcome innovation to all users of such equipment.

Compare These Outstanding Features!

- Four ranges of adjustable magnification are provided with 10" linear scales.
- Tube is spring-loaded with positive seal to provide for simple change.
- Captive float cannot drop out when tube is removed.
- Spare tubes and scales can be stored internally in the column.
- Modular design permits flexibility in grouping units in minimum space.
- Complete range of tooling is available for gage use.

RCA offers these Air Gages as single or multiple units for bench type operation or as components of automatic systems. A complete range of tooling is also available for all types of measurements normally performed with this equipment.

Before you buy Air Gaging, Check RCA. Write to RCA, Industrial Controls, Dept. X-329, 12605 Arnold Avenue, Detroit, Mich., or see your RCA Representative.

The Most Trusted Name in Electronics
RADIO CORPORATION OF AMERICA

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NEW EQUIPMENT DIGEST

A PENTON PUBLICATION

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Pre-formed, independent polyvinyl drum liners convert standard drums to storage and handling tanks for acids and other corrosives, including chrome plating solutions and nitric acid. Installed in minutes!

Snug-fitting liners of heavy-duty plastic are a full 22½" in diameter, 41" long. Seams are electronically welded, free of flash and raw edges. Offer maximum resistance to snags and tears. Order these handy liners today! **Only $19.75 each, F. O. B. Detroit, Michigan.**

THE UDYLITE CORPORATION • DETROIT 11, MICHIGAN

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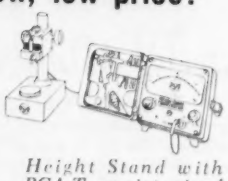
PRECISION BUILT HEIGHT STAND AND CASE

at an exceptionally low, low price!

Unique fine-adjustment support bracket assures rapid set-up and perpendicularity of gage head or indicator. Standard AGD mounting provided. Vertical range 4". Overall height 8½".



Height Stand with RCA Transistorized Comparator. Price of Stand $65.

Write today for complete information.
RCA, Dept. X-329, 12605 Arnold Avenue,
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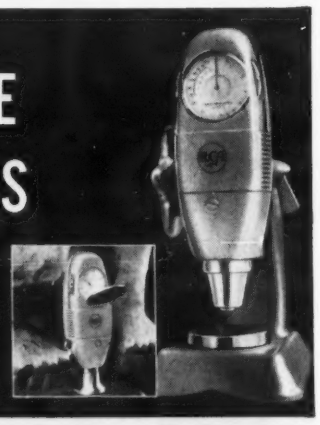
PORTABLE HARDNESS TESTER



for both Vickers and "C" scale hardness readings

Can be used as a standard bench-type unit for inspecting small parts. Removed from stand, main body is equipped with press handgrip and may be used to measure large or complicated curved surfaces. Can also be used to check soft metals such as aluminum or copper where thickness is more than 0.6 mm.

Write today for complete information RCA, Dept. X-329, 12605 Arnold Avenue, Detroit, Michigan.

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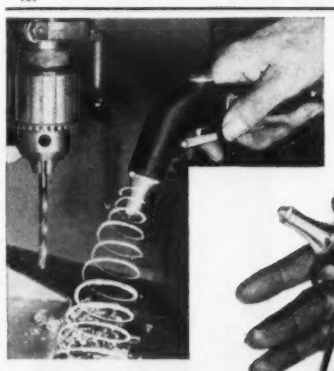

BLOW away dust, dirt, particles from work with the SAF-T-AIR cyclonic BLOW GUN

A CLEAN SWEEP with NO FACEFULL!

Chips, dust and waste are whirled down and out by the SAF-T-AIR's exclusive cyclonic action, while the operator remains safely behind a conical shield of high velocity air that stops flyback. Protection is part of the tool itself. Wide cone cleaning action reduces air consumption up to 40%. Extension nozzles available for deep crevice work. SAF-T-AIR blow guns are not a substitute for safety glasses: they give extra protection.

Write for FREE catalog and name of your SAF-T-AIR dealer.

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E. V. NIELSEN, INC.
934 HOPE STREET, SPRINGDALE, CONNECTICUT

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YOUR BEST MOVE: A SET OF DI-PELCO MULTI-PURPOSE LIFT TRUCKS

Gives you all these tools:

1—A Lifting and moving device second to none.
2—Hand Trucks.
3—Floor Dollies. *These add up to:*

A LOT OF MOVING PROBLEMS SOLVED WITH ONE LOW PURCHASE PRICE

Some of our customers: G.E., Western Electric, International Harvester, Victor Adding Machines, Cornell U., Sprague Electric, etc., etc.

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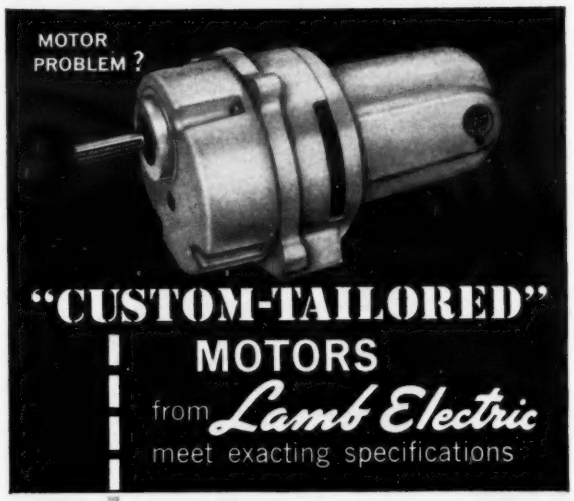
For more details circle NED-36 G1 on enclosed inquiry slip



If your new product requires a special fractional horsepower motor, let Lamb Electric do the THINKING • DESIGN • MANUFACTURE • You get the RIGHT motor produced at the most favorable cost.

FREE! Write today for descriptive folder, and information on how you can set up a "Motor Conference"

THE LAMB ELECTRIC COMPANY • KENT, OHIO
A Division of American Machine and Metals, Inc.
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Lamb Electric
SPECIAL APPLICATION FRACTIONAL HORSEPOWER MOTORS

For more details circle NED-37 G1 on enclosed inquiry slip

CUT AIR TOOL MAINTENANCE COSTS...

with Clean-Dry Compressed Air!

ADAMS AFTERCOOLERS provide virtually complete condensation of tool-damaging oil, moisture and dirt from pipeline gases — by efficient cooling to within 10°F. of the cooling water. ADAMS CYCLONE SEPARATORS then remove this condensate at a constant separation factor over all load ranges.

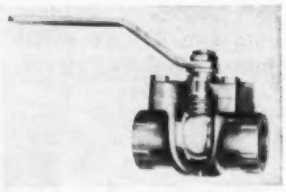
Adams offers this outstanding performance at substantial savings, made possible through specialization in Aftercoolers and Cyclone Separators — plus quality manufacturing methods developed over the years.

Investigate this low-cost method of protecting your pneumatic tools — write today for Bulletin 715! R. P. Adams Co., Inc., 227 East Park Drive, Buffalo 17, New York.

ADAMS QUALITY COMES THROUGH

For more details circle NED-38 G1 on enclosed inquiry slip

BALL VALVES
seats assure dangerous fluid shutoff



Fire-Seal seats in Hills-McCanna ball valves assure tight shutoff of inflammable or dangerous fluids in case of fire. Primary seat of metal-encased, reinforced Teflon incorporates a machined secondary metallic seating surface. If Teflon is destroyed by heat, shutoff of flow is insured by metal-to-metal contact between ball and secondary seat. Top-entry McCannaseal valves with screwed ends are stocked in 1 through 3-in. sizes and with 150 and 300-lb flanged ends in 1 through 8-in. sizes. McCannaflo bar stock valves are stocked in 1/4 through 2-in. screwed end sizes. Both have Fire-Seal seats. • **Hills-McCanna Co.**, 400 Maple Ave., Carpentersville, Ill.

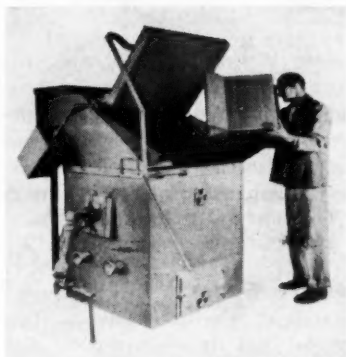
For more details circle NED-39 G1 on enclosed inquiry slip

HEAVY-DUTY DEGREASER
removes grease, dirt from machinery

Stubborn accumulations of grease and grime are quickly removed from industrial machinery by Navee '42, a heavy-duty marine and industrial degreaser. Typical uses include removing oils spills, or cleaning industrial areas, motor blocks, axles, fork trucks, hoists, and grease racks. Product is effective on bunker C oil, carbon stains, diesel oils, preservative coatings, lead oxides, grease, tar, and printers' ink, and is well suited for cleaning storage tanks. It emits no hazardous fumes, has a high flash point, is not volatile, and is free from fire risk under most conditions. Inhibited version Navee '427 is offered for aircraft industries and aluminum fabricators. • **Penetone Co.**, 74 Hudson Ave., Tenafly, N. J.

For more details circle NED-40 G1 on enclosed inquiry slip

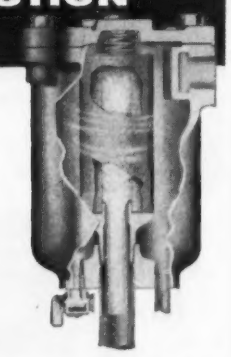
INDUSTRIAL INCINERATOR
improved unit accepts larger boxes



Improvements afforded by Model C 2 Wincinator industrial incinerator include a wide trough around the charge door opening and a counter - balanced one - piece door which opens wide for large crates and cartons. A second butterfly air vent in front and above the grates provides faster combustion and over-fired air. Five other models afford a wide range of capacities. Unit can also be built in any size to customer specifications. • **Winnen Incinerator Co.**, 932 Broadway, Bedford 10, Ohio.

For more details circle NED-41 G1 on enclosed inquiry slip

POSITIVE PRODUCTION PROTECTION



. . . accurately describes the exclusive double action cleaning of the ADAMS AIR FILTER . . . centrifugal separation followed by diffusion through the millions of tiny openings of the Poro-Stone element. The filter, installed at the terminal points of your system, completely frees the compressed air of entrained liquid, and any scale picked up in the distribution piping. Expensive production downtime, repairing air operated tools—cleaning fouled equipment components—reworking off-grade spray painting—are all unnecessary *and* eliminated when the Adams Poro-Stone filter provides clean, dry air. Adams units require virtually no service and maintenance — insuring continuous low-cost performance. They are available in a wide range of capacities to suit your needs. Bulletin 118 will give you all the facts. Write for your free copy today. R. P. Adams Co., Inc., 227 East Park Drive, Buffalo 17, N. Y.

ADAMS QUALITY COMES THROUGH

For more details circle NED-42 G1 on enclosed inquiry slip

burn

your permanent mark into IRON, STEEL or ALLOYS — tools, labels, metal sheets, etc.

IDEAL "UNIVERSAL" ELECTRIC ETCHERS

ELIMINATE inventory mix-ups, lost tools, parts, label errors. SAFE and QUICK as a pencil.

SEE YOUR IDEAL DISTRIBUTOR — OR WRITE FOR FULL INFORMATION

Sold Through America's Leading Distributors

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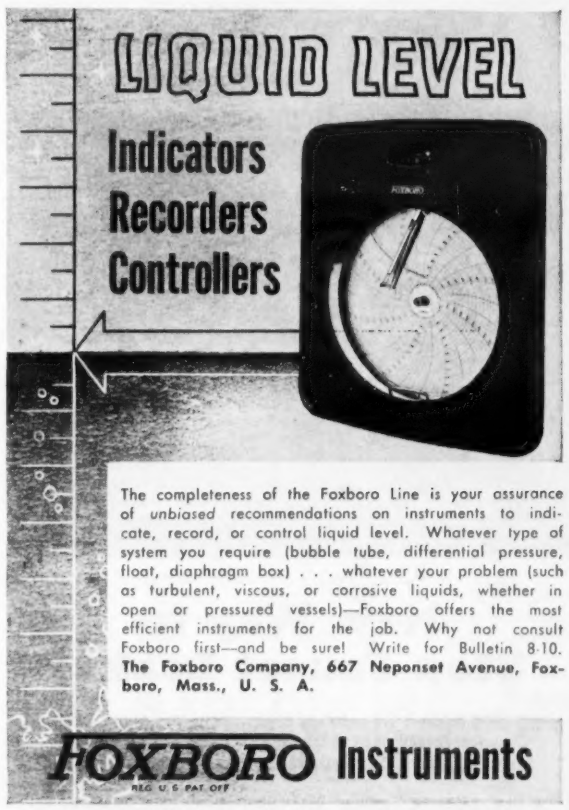
Every plant has dozens of uses where Ideal Etchers save money and time! Marks can't be changed or overlooked. Far cheaper than tags and special plates. "Universal" model gives you 4 etching heats for all conductive metals — 120 to 400 watts. Other models for all types of work. Make your mark easier, faster in complete safety.

IDEAL INDUSTRIES, Inc.
1032-G Park Ave.
Sycamore, Illinois

For more details circle NED-43 G1 on enclosed inquiry slip

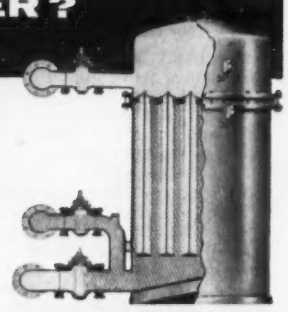


The completeness of the Foxboro Line is your assurance of *unbiased* recommendations on instruments to indicate, record, or control liquid level. Whatever type of system you require (bubble tube, differential pressure, float, diaphragm box) . . . whatever your problem (such as turbulent, viscous, or corrosive liquids, whether in open or pressured vessels)—Foxboro offers the most efficient instruments for the job. Why not consult Foxboro first—and be sure! Write for Bulletin 8-10. **The Foxboro Company, 667 Neponset Avenue, Foxboro, Mass., U. S. A.**

FOXBORO Instruments
REG. U. S. PAT. OFF.

For more details circle NED-44 G1 on enclosed inquiry slip

NEED LOW COST FILTERED WATER ?



Why not investigate the many advantages of the ADAMS IWF INDUSTRIAL FILTER for all your water needs? Manufacturing skill backed by 25 years of building water and chemical filters insures you top value for your purchasing dollar. Rugged construction and the Adams Poro-Stone, Poro-Carbon and other permanent metallic filter media practically eliminate maintenance problems. The exclusive Adams air pressure dome dynamically backwashes and flushes out accumulated solids in minimum time — with minimum labor — to give top value for your production dollar. There is an Adams design to solve all your liquid polish filtration problems. Why not investigate the many advantages of an Adams unit in your plant? Bulletin #651 has all the information. Interested in chemical filtration? Ask for your copy of bulletin #431. Automatic filtration? Ask for bulletin #909. R. P. Adams Co., Inc., 227 East Park Drive, Buffalo 17, New York.

ADAMS QUALITY COMES THROUGH

For more details circle NED-45 G1 on enclosed inquiry slip

Protected performance in cam follower, guide and support roller applications

Sealed and pre-lubricated McGILL CAMROL® bearings

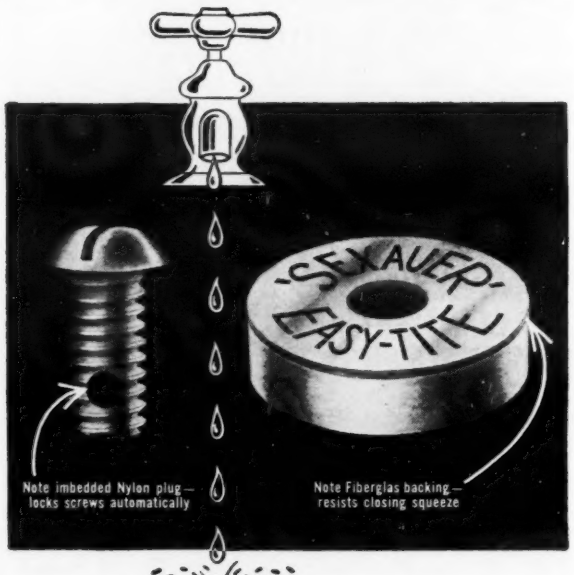
Protect your roller follower applications for longer life with sealed CAMROL bearings. McGill packs high load capacity, precision accuracy, and positive seals into standard bearings. Avoid building up special units. The SCF series is complete with integral stud. In the SCYR series an inner race provides for shaft mounting. Black ferrous oxide finish adds corrosion resistance. Roller diameters range from ¾" to 4".

Write for helpful Bearing Handbook No. H-54-B

engineered electrical products McGILL® precision needle roller bearings

McGILL MFG. CO., Bearing Div., 101 N. LAFAYETTE ST., VALPARAISO, IND.

▲ For more details circle NED-46 G1 on enclosed inquiry slip ▲



New Way to Stop Faucet Leaks!

★ 9-in-10 washers are fastened with TOO LONG or SHORT SCREWS thus loosen and destroy themselves. Leaks quickly follow!

34 YEARS OF RESEARCH REVEALS NEW SOLUTION

★ New, patented 'Sexauer' SELF-LOCK screws have imbedded expanding NYLON PLUG. They lock at required depth AUTOMATICALLY, hold washers firmly! Made of MONEL, they are rustproof, non-corroding. Heads can't twist off. Screw slots can't distort.

★ NEW, improved 'SEXAUER' EASY-TITE faucet washers are made of super-tough, pliable du Pont compound (not rubber or fibre). Reinforced with a vulcanized layer of Fiberglas, they resist distortion and splitting from shut-off grind and squeeze.

★ Faucet leaks repaired with 'Sexauer' EASY-TITE faucet washers and SELF-LOCK screws outlast ordinary repairs "6-to-1"!

HIDDEN COSTS OF FAUCET LEAKS!

Hackensack, N. J. Water Co. and American Gas Association figures prove stopping just ONE PIN-HOLE SIZE (1/32") LEAK saves you 8,000 gal. water quarterly. A HOT WATER FAUCET LEAK repair saves you over $7.58 QUARTERLY in fuel and water bills. Fewer leaks also produce important savings on MATERIALS, LABOR and COSTLY FIXTURE REPLACEMENTS!

A 'Sexauer' Technician will make available our NEW Catalog, Edition "J", listing our entire line of over 3,000 TRIPLE-WEAR plumbing repair parts and tools. He will survey your fixtures, determine the repair parts needed and establish an efficient stock arrangement and control to prevent costly overstocking or shortages. You get this service without obligation. *Act now!*

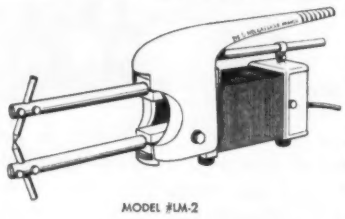
J. A. Sexauer Mfg. Co., Inc., Dept. AU-71
2503-05 Third Ave., New York 51, N.Y.
Please send me a copy of your NEW Catalog "J"
Name _____ Title _____
Organization _____
Bus. Address _____
City _____ Zone _____ State _____

SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

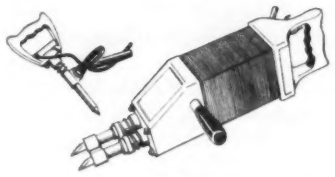
▲ For more details circle NED-47 G1 on enclosed inquiry slip ▲

SPOT WELDERS have low voltage secondary circuits

Four models of standard LM spot welders will weld from two 42-gage sheets to two 16, 10, and 7-gage sheets. Welding two 1/16-in. rounds to two 5/16, 9/16, or 1-in. rounds is also within their ranges. Arm lengths are up to 20 in. One model is designed for mid-sheet welding, with both welds applied from the same side. A "ferret" attachment on an extension makes possible simultaneous welding on both sides of large workpieces. Largest model has dry or water-cooled electrodes.



MODEL #LM-2



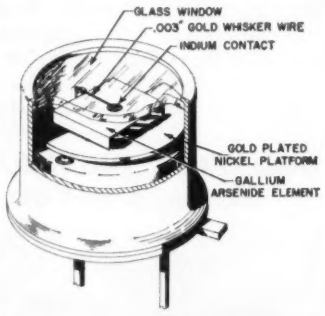
MODEL #LM-3

Welders are available in 110, 220, and 380-v models, with other voltages optional. Electrodes are replaceable. Prices range from $115 to $400. • **Price & Rutzebeck**, Box 30, Hayward, Calif.

▲ For more details circle NED-48 G1 on enclosed inquiry slip ▲

PHOTOVOLTAIC DETECTOR has 0.85-micron peak sensitivity

High sensitivity for both visible and near-infrared radiation detection is provided by the GAU-401 gallium arsenide photovoltaic detector, designed to fit in a tiny TO-18 transistor case. The solid state device has a 0.4 to 0.9-micron range, peak sensitivity of 0.85 microns, and is capable of sensing during daylight without serious degradation in sensitivity. Operation at up to 120° C also shows no loss in detector sensitivity. Miniaturization makes possible the combination of a solid state amplifier and photo detector potted in a single block no larger than a matchbox. Industrial uses include computer readout and numerous process controls. • **Philco Corp.**, Lansdale Div., Church Road, Lansdale, Pa.



▲ For more details circle NED-49 G1 on enclosed inquiry slip ▲

Thermometers & Pressure Gages

FREE American - Standard, Controls Div. — Ten standard models of bimetal dial thermometers in dial sizes from 1 to 5 in. and with stem lengths from 2½ to 72 in. are reviewed in 4-page Bulletin 282. Scales range between −150 to 1000° F. Also presented are 3 and 5-in. dial size pressure gages with ranges up to 5000 psi.

▲ For more details circle NED-50 G1 on enclosed inquiry slip ▲

AGAIN MARCO SETS THE PACE
WITH POWERFEED MODEL 70

ONE MAN

SIMPLE ON-OFF FEED DRIVE FOR 3" TO 6" SEWER LINES

1. Add 3/4" x 55' Cartridges as needed.
2. QUICKLY disassembled for weight distribution.
3. Adaptable to 5/8" Spring for 1½" to 3" lines.

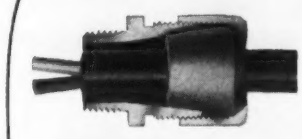
MARCO PRODUCTS COMPANY
3416 Vineyard Ave., Los Angeles 16, Calif.
364 Henry Street, Lexington, Kentucky

Manufacturers of QUALITY Pipe Cleaning Tools
Distributed through WHOLESALERS for 38 years.
Closet Augers • Coiled Springs • Top Snakes
Sewerods • Flat Steel Tapes • Power Equipment
IDEAL FOR INDUSTRY—SEND FOR OUR CATALOG

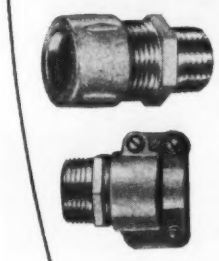
▲ For more details circle NED-51 G1 on enclosed inquiry slip ▲

RALCO CORD GRIPS

LOW COST INSURANCE AGAINST LOOSE or BROKEN CONNECTIONS



Non-Corrosive, Lightweight Aluminum Alloy Construction
Firm, Rubber-to-Rubber Grip
Available With Additional Mechanical Grip For Large Diameter Cords or Severe Service
For 3/8" to 2" Pipe Sizes



CHECK AND COMPARE THESE LIST PRICES!

List Prices

Pipe Size	Male	Female
3/8"	$ .35	$ .45
1/2"	.50	.60
3/4"	.80	.95
1"	1.20	1.45
2"	3.60	4.00
1/2"—90° Angle Cord Grip		$1.20

90° Elbow Grip

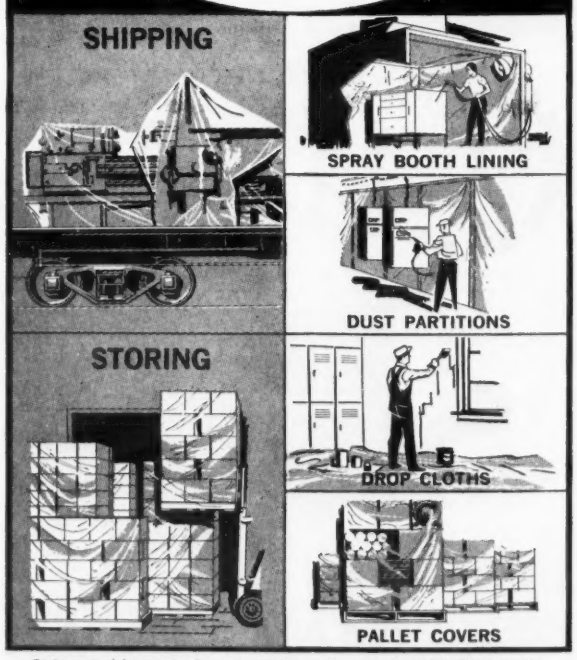
WRITE FOR CATALOG AND PRICES!

1911 RALCO 1961
50 YEARS OF SERVICE
"Where Precision and Quality Cost Less"

RALCO MFG. CO.
134 No. Albany Ave., Chicago 12, Ill.

▲ For more details circle NED-52 G1 on enclosed inquiry slip ▲

6 WAYS GER-PAK® POLYETHYLENE SHEETING PROTECTS



Get new ideas on low-cost protection with GER-PAK waterproof polyethylene sheeting. For shipping, storage, work in process, products and equipment—bulk or small—you're fully protected against weather, dust, dirt and water. For many daily in-plant needs, heavy duty GER-PAK sheeting is a time and money saver. Comes in seamless sheeting up to 40 feet wide or tubing up to 20 ft. lay-flat width (standard thicknesses are 1-mil (.001 in.) to 10-mil (.010 in.). And for positive sealing, use new super-adhesive GER-PAK Polyethylene MIRACLE TAPE®, specifically designed for use with GER-PAK sheeting.

WRITE TODAY FOR SAMPLES AND LITERATURE.

GERING PLASTICS
division of Studebaker-Packard Corp., Kenilworth, N. J.

OTHER USES FOR GER-PAK POLYETHYLENE SHEETING
liners for drums, cartons, crates, bins • in-plant waterproofing • equipment covers • wrapping tools • machinery covers • temporary shipping platform covers

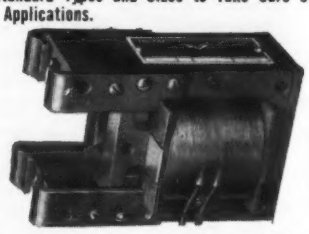
▲ For more details circle NED-53 G1 on enclosed inquiry slip ▲

TROMBETTA SOLENOID CORP.
MILWAUKEE WISCONSIN
U.S.A
329 N. Milwaukee St. • Phone BRoadway 1-8347

NA-700 LINE OF SHORT STROKE SOLENOIDS

PLUS FEATURES, SUPERIOR DESIGN DELIVER PEAK PERFORMANCE

- Positive 3-Point Contact and Non-Magnetic Plunger Guides Assure Much Longer Solenoid Life.
- Non-Magnetic Plunger Guides Prevent Sticking-Dragging, Permitting Solenoid To Be Mounted in Any Position Without Affecting Operation or Life Expectancy.
- 230 Standard Types and Sizes to Take Care of Any and All High Class Applications.



NA-764 SHORT STROKE SOLENOID

Specially adapted for hydraulic and air valve operation. Solenoids may be mounted in any position at any angle to the vertical without affecting operation. Silent operation in sealed position. Interchangeable size for size with entire line of National Acme line of solenoids. Pull rating same for all voltages and frequencies, AC as well as DC. Write for bulletin EE-178.
IN 1924 MR. TROMBETTA GAVE THE WORLD THE COMMERCIAL SOLENOID

For more details circle NED-54 G1 on enclosed inquiry slip

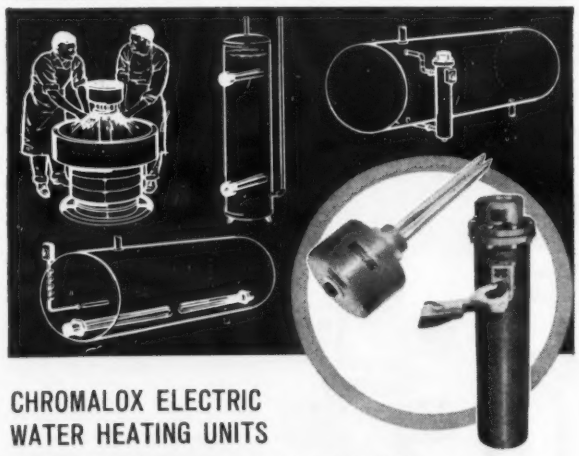
CHROMALOX ELECTRIC
snow-bar

A NEW SNOW-MELTER for asphalt or concrete walks, steps, driveways. Snow-Bar is a new electric snow-melter specially designed for installation in hot asphalt base compounds. Rugged enough to withstand the over 300°F. pouring temperature of hot-pack asphalt. Can be installed over existing gravel, asphalt or concrete. Installs easily, operates rapidly, performs economically. Available in soft-annealed coils or convenient-to-install preformed units. For full specifications, **Write for Data Sheet M60103.**

W-16

CHROMALOX ELECTRIC HEAT
EDWIN L. WIEGAND COMPANY
7509 THOMAS BOULEVARD, PITTSBURGH 8, PA.
PROCESS COMFORT

For more details circle NED-55 G1 on enclosed inquiry slip



CHROMALOX ELECTRIC WATER HEATING UNITS

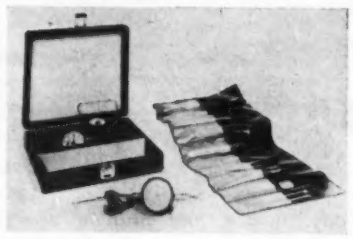
FOR HOT WATER ANYWHERE as much as you need . . . when you need it. Chromalox Heating Units are a sure answer for a dependable supply of hot water anywhere in your plant—winter or summer, even when comfort heating boilers are down. Units have separate or built-in controls, can be quickly installed. Available as screw-in or flanged immersion heaters and side-arm circulation heaters. No fumes, no flues, no pilot flame, no fuel shortage worries. Maintenance-free service. **Write for Water Heating Bulletin PD-105.**

WI-17

CHROMALOX ELECTRIC HEAT
EDWIN L. WIEGAND COMPANY
7509 THOMAS BOULEVARD, PITTSBURGH 8, PA.
PROCESS COMFORT

For more details circle NED-56 G1 on enclosed inquiry slip

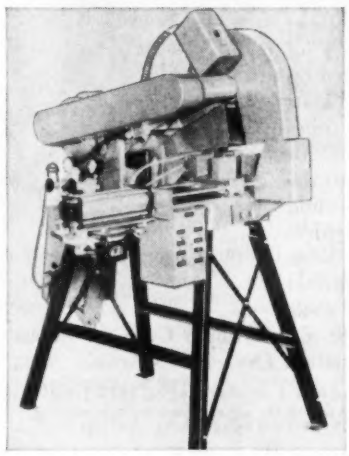
SWITCH MAINTENANCE KITS include instrument and tools



Two instrument and tool kits, designed for maintenance of complex electromechanical switching devices, are also useful for general maintenance of relay matrices, stepping-switch systems, spring leaf commutators, slip rings, and cam-operated switches. In addition to suitable gram gages and dial indicators, each kit contains a rocker adjusting tool, an interposer eyelet tool, a probe, needle-nose pliers, pen light, tweezers, shims, various wrenches, and a set of screwdrivers. Kit SF-80 is used with Types A and F crossbars; Kit SF-90, for P and T crossbars. Each is contained in a carrying case, weighs about 4 lb, and is priced at $175. • **James Cunningham, Son & Co.**, Box 516, Rochester 8, N. Y.

For more details circle NED-57 G1 on enclosed inquiry slip

ABRASIVE CUTOFF MACHINE desired lengths cut automatically



Most shapes up to 3 in., standard bars, and 1¼-in. solid stock can be cut by the No. 14 automatic abrasive cutoff machine. Operating at up to 1500 cuts per hour, it's feed stroke is adjustable from 3/16 to 8 in. Longer feeds are obtainable on special order. An air vise securely holds most shapes for semiautomatic or automatic cycle cutting, or for maintenance type cutting. Air pressure control adjusts wheel pressure and prolongs cutting wheel life by 30 per cent. The 14-in. diameter wheel runs at 3000 rpm, driven by a 5-hp, three-phase, 60-cycle motor. • **Beaver Pipe Tools, Inc.**, 300 Dana Ave., Warren, Ohio.

For more details circle NED-58 G1 on enclosed inquiry slip

Coated Strip Steel

FREE Sharon Steel Corp.—Industrial applications of coated strip steel are pointed up in illustrated brochure, compiled to help the user select the proper coated steel for his product. It details sizes, forming, welding, soldering, cleaning, chemical treatment, temper classifications, and Preece tests involving Galvanite, Bright Zinc, special alloy coat, electro-galvanized, and painted and printed steel.

For more details circle NED-59 G1 on enclosed inquiry slip

At Your Service...

CHROMALOX FIRST NAME IN ELECTRIC HEAT

CHROMALOX and RADCOR Sales and Engineering Representatives

WI-20

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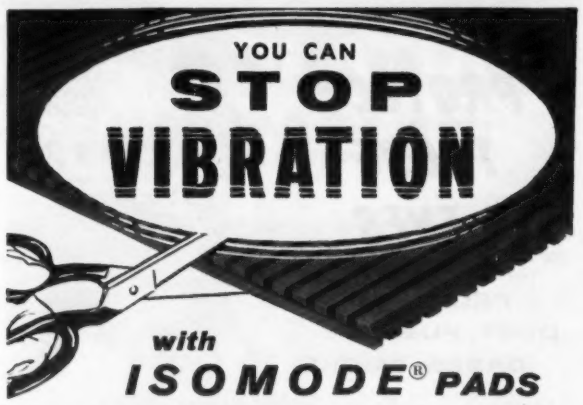
For more details circle NED-60 G1 on enclosed inquiry slip

YOU CAN **STOP VIBRATION** with **ISOMODE® PADS**

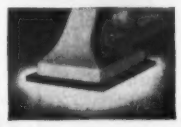


Low-Cost Sample Pad will prove it!

Isolate heavy machine vibration effectively and cut down noise with ISOMODE PADS made of durable, oil-resistant DuPont Neoprene. Patented design supports 200 pounds of machinery with only four square inches of pad. *Eliminates need to anchor machinery;* makes machine installation and re-location easier and more economical.

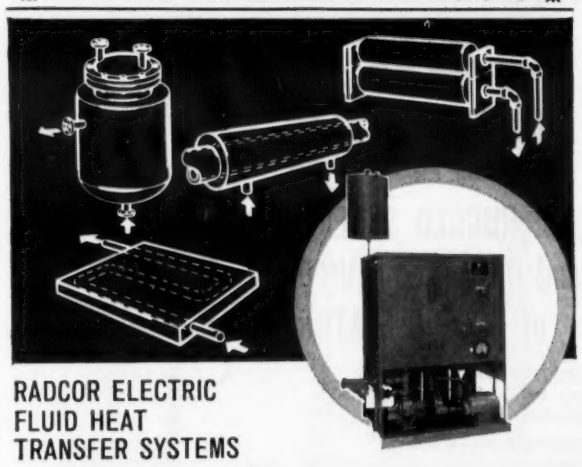
Send for details of one-pad trial offer at discount price, and free technical literature. Ask our representative to call and analyze your requirement.

Complete Line of Products For Vibration Isolation



ISOMODE
DIVISION **MB** ELECTRONICS
A DIVISION OF TEXTRON ELECTRONICS, INC.
1066 STATE STREET, NEW HAVEN 11, CONN.

For more details circle NED-61 G1 on enclosed inquiry slip



RADCOR ELECTRIC FLUID HEAT TRANSFER SYSTEMS

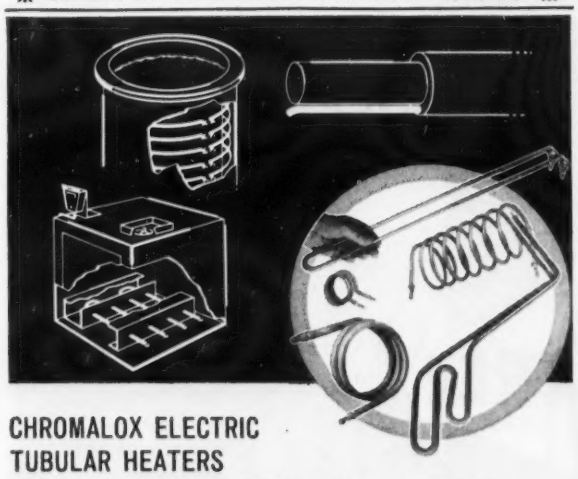
ACCURATE HEAT from single compact package. All necessary elements of the Radcor heat-transfer system are in one, all-welded, compact package. Automatic controls generate only as much heat as required, without high pressures.

Heat source is Chromalox Electric Circulation Heater. Temperatures to 600°F, automatically and accurately maintained. Ten different standard models to choose from, in two cabinet sizes ranging from 15,350 to 272,000 Btu's **Write for Bulletin BRP100-1.**

R-2

RADCOR, INC.
BRADNER, OHIO
ELECTRIC HEATING SYSTEMS
A Subsidiary of Edwin L. Wiegand Company

For more details circle NED-62 G1 on enclosed inquiry slip



CHROMALOX ELECTRIC TUBULAR HEATERS

HEAT APPLICATIONS UNLIMITED

Versatile Chromalox Electric Tubular Heaters, in limitless straight or tailored shapes are used for convection, conduction and radiant heating. They may be clamped to metal surfaces, fitted into machined grooves, cast into metals, immersed in liquids, installed in ovens, calenders, molding-presses and similar equipment.

Wide selection of sheath metals, voltages, wattages and temperature controls to suit your exact needs. **Send for Catalog 60.**

WI-12

CHROMALOX ELECTRIC HEAT
EDWIN L. WIEGAND COMPANY
7509 THOMAS BOULEVARD, PITTSBURGH 8, PA.
PROCESS COMFORT

For more details circle NED-63 G1 on enclosed inquiry slip

Special goggles provide safety for workmen, relieve tired eyes.

FOG-PROOF GAS-TIGHT GOGGLES

Hug face securely but comfortably. Can be worn with any respirator. Fog is removed from the lenses by an easy nod or shake of the head. A few drops of water on inner wall of lens do the trick.

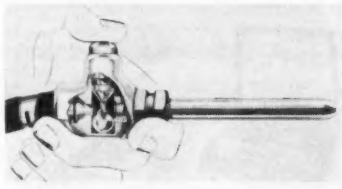
COVER goggles and respirators are known world over for reliability. Send for literature.

See your safety equipment supplier or order your sample direct — $2.00 postpaid. Write today.

H. S. COVER
Dept. 705 South Bend 14, Indiana
"Respirators for Industry Since 1894"

▲ For more details circle NED-70 G1 on enclosed inquiry slip ▲

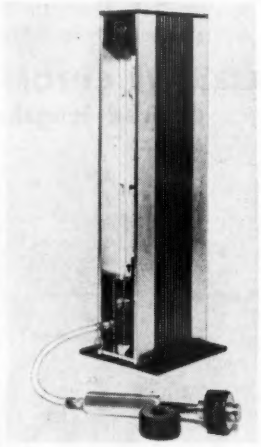
AIR BLAST NOZZLE
valve operated by light pressure



Powerful air blast is delivered with only light finger pressure on this Shear-Air valve which is resistant to wear and corrosion and assures tight shutoff. Body, nozzle, and plunger are nickel plated bronze, and an O-ring seal on the plunger prevents leakage. Unit is 4 in. long, weighs 5 oz., and is tapped for 1/4-in. pipe. A snap-on hook provides for hanging. • **General Kinetics Corp.**, 197 S. Van Brunt St., Englewood, N. J.

▲ For more details circle NED-73 G1 on enclosed inquiry slip ▲

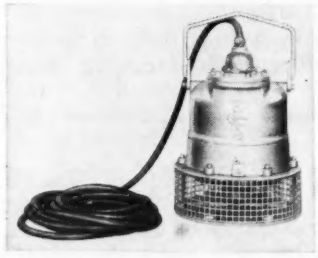
PRECISION AIR GAGE
adapts easily to multiple grouping



Designed for bench type operation and usable as a component of automatic inspection systems, this compact RCA precision air gage can be grouped into multiple systems that are expandable at any time. Four ranges of amplification are provided on 10-in. linear scales. Floats cannot drop out of the tubes which are spring-loaded for ease of changing in the column. Spare tubes and scales can be stored within the case, and ample room is provided for a manifold in the base. A line of tooling is available for gage use. • **Radio Corp. of America**, Industrial & Automation Div., 12605 Arnold Ave., Detroit 39, Mich.

▲ For more details circle NED-74 G1 on enclosed inquiry slip ▲

SUBMERSIBLE PUMP
8-in. model has 65-hp motor



Capacity of the Model S8A1 submersible dewatering pump ranges from 1000 gpm at 148-ft head to 2700 gpm at a 40-ft head. The 8-in. unit has an oil-filled motor housing and dual seals that run in oil. The 775-lb pump is made of aluminum with 480 sq in. of strainer area with 1-in. square openings. Powered by a 65-hp, 1750-rpm, 220 or 440-v motor, it is offered with 50 ft of cable. • **Gorman-Rupp Co.**, 305 Bowman St., Mansfield, Ohio.

▲ For more details circle NED-75 G1 on enclosed inquiry slip ▲

ALLSAFE FAN GUARD

Prevents personal injury from contact with fan blades

• *Protects entire fan* • *Easily installed and laundered* • *No interference with air movement* • *Made from cotton woven mesh* • *Lightweight, gray* • *Special sizes are available*

SPECIFICATIONS

Fan Diameter	Price Per Dozen	Price Each
8"	$16.00	$2.05
10"	16.50	2.15
12"	24.25	2.40
14"	25.85	3.05
16"	27.35	3.70
18"	28.80	4.05
20"	32.75	4.20
24"	34.60	4.35
25"	39.35	4.70
28"	49.70	5.05
30"	52.00	5.35
34"	59.25	5.70

Mail your order to

AMERICAN ALLSAFE CO., INC.
1247 Niagara St. TT 3-8300 Buffalo 13, N. Y.

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CM PULLER

for RUGGED STRENGTH and GREATEST NUMBER of USEFUL FEATURES

CAPACITIES FROM 3/4 TO 6 TONS

LIFETIME LUBRICATED

Lifts or pulls in any position

SMOOTH OPERATION
Easy operating, accurate spotting, effortless lowering.

POSITIVE BRAKING
Holds load automatically with non-slip action.

RUGGED CONSTRUCTION
Built of heat treated alloys of steel and aluminum.

SUPER-STRENGTH CHAIN
Famous CM-Alloy link chain; long-lasting, non-kinking, self-cleaning.

• *Send for bulletin and name of your local distributor*

CM HOISTS

CHISHOLM-MOORE HOIST DIVISION
COLUMBUS McKINNON CORPORATION
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Now Self-Curing!
DIMETCOTE NO. 4
One Coat Prevents Steel Corrosion!

DIMETCOTE NO. 4, the new maintenance version of original DIMETCOTE NO. 3, requires no primer or curing solution...self-cures in minutes! One spray coat of this non-hazardous inorganic zinc silicate provides enduring protection against severest atmospheric exposure. DIMETCOTE has excellent abrasion resistance and cathodically protects steel surfaces from corrosion. Insoluble in all petroleum products. One-coat application saves time and labor with lower material costs.

Write for Technical Data
134A

Amercoat CORPORATION
Dept. zs, 4809 Firestone Blvd. South Gate, Calif.

921 Pitner Ave., Evanston, Ill. • 360 Carnegie Ave., Kenilworth, N.J.
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MAKE EFFICIENT SYSTEMS from BUSCHMAN IN-STOCK units

Buschman standardized portable conveyors save far more than they cost, handling all kinds of packages, in large and small operations. Select wheel, roller, belt components from stock, to install your own conveyor line. Or build your own Overhead Trolley Cable Conveyor from Buschman standardized units. Consult our agent or write direct.

Complete Conveyor Systems for all Industries—Engineered, Manufactured, Installed
Representatives in Principal Cities; See Yellow Pages

Buschman CONVEYORS

371

The E. W. Buschman Company, 4482 Clifton Avenue, Cincinnati 32, Ohio

▲ For more details circle NED-76 G1 on enclosed inquiry slip ▲

CONVEYOR CHAINS and PARTS

New C-30 Steel Heat Treated Chain is a conveyor in itself. Ideal for moving cases, cans, cartons, parts, etc., through several operations, such as washing, packing, heat-treating, drying, filling, etc.

BEEF CLASS FORGED PINTLE CHAIN. Heavy duty detachable heat-treated chain in large and small size for unusual wear applications. L. RAM-52 1½" pitch. R. RAM 52-K-73 attachment.

CAST SPROCKETS for above chain. If you use quantities of sprockets in your operations, let us quote you on your specifications.

Special forged chain made to your requirements.

ROBERT A. MAIN & SONS, INC.
Main & New Sts., Wyckoff, N. J. Phone: TWinbrook 1-201

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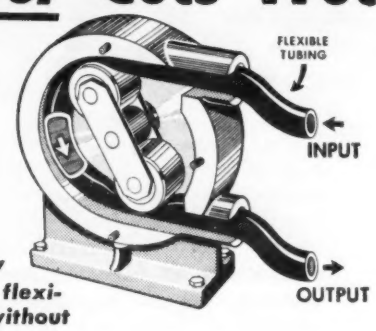
The Pump That *Never* Gets Wet



Fluids flow through a flexible tube without contacting the pump.

CAPACITIES UP TO 185 G.P.H.

RANDOLPH PUMP

For Literature and prices, write the
RANDOLPH CO.
1018 Rosine Street,
Houston 19, Texas
JAckson 6-2091

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Don't spoil it- KROIL it!

Don't ruin a valuable piece of equipment merely because some part is rusted tight. Apply *KROIL*, the amazing new chemical lubricant that creeps into millionth inch spaces (proved by laboratory tests), **dissolves rust, supplies necessary lubrication and . . .**

Loosens Frozen Parts

18,000 of America's leading plants can't be wrong. They have used KROIL for ten years and depend on it to save expensive labor and valuable parts. They say: "Kroil loosened bushings after a 12-ton press had failed" . . . "on repairing heat treat trolleys formerly destroyed every nut. Now Kroil saves them all, and time, too."

You too can get these results. Try KROIL on money-back basis.

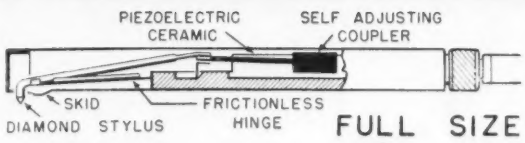
Gallon, **$4.35**; with Kroiler squirt gun, **$5.25**, f. o. b. factory.

Ask for GENIUS AT WORK—a free publication full of ideas for maintenance men.

KANO LABS. 1074 Thompson Lane Nashville 11, Tenn.

▲ For more details circle **NED-81 G1** on enclosed inquiry slip ▲

SURFACE FINISH MEASUREMENT



PICKUP DESIGN

The heart of any surface finish measurement instrument is the pickup. This component determines the performance and versatility of the gage. The above design illustrates the most advanced pickup available. In many respects similar to a high fidelity phonograph cartridge, it employs a piezo-electric ceramic element, which is unaffected by temperature, humidity and other environmental factors. The flexing of this ceramic converts the variations in surface finish height into an electrical signal.

The self adjusting viscous coupling assures operation from a true neutral point and prevents excessive stylus pressure without critical leveling of the pickup. This feature also reduces the number of skids required. The inherent simplicity of the pickup design reduces maintenance as well as the initial cost of the equipment. The small size of the basic pickup eliminates the need for many special types or adapters. Other pickups are available which permit measurements on very small or narrow areas, flanges, thread flanks, gear teeth, small internal diameters and "O" ring grooves.

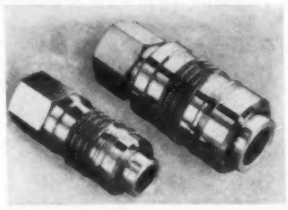
All other Roughness Meter items, amplifier, mechanical trace and skidless trace, make use of similar advanced designs.

Write for information or a demonstration.

Cleveland INSTRUMENT COMPANY
A SUBSIDIARY OF THE BENDIX CORPORATION
6220 East Schaaf Road • Cleveland 31, Ohio

▲ For more details circle **NED-82 G1** on enclosed inquiry slip ▲

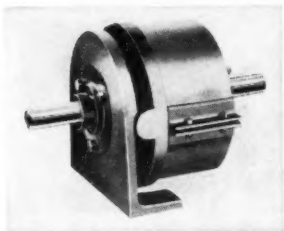
PNEUMATIC COUPLINGS
line includes a coupling-valve unit



Line of pneumatic couplings includes the new Dyna-Con coupling and valve series shown. The high capacity unit features unrestricted air-flow. Connection is easy because there is no line pressure or valve spring resistance to overcome. It can be connected at difficult angles under full line pressure with one hand. Twist safety lock prevents accidental uncoupling. Other series in the line are the Dyna-Quip ball type for limited quick-disconnect service and the Dyna-Matic, an automatic pin-type coupling which features a hardened stainless pin resting against hardened stainless back-up ring. • **Stile-Craft Manufacturers, Inc.**, Dyna-Quip Div., 1825 Macklind Ave., St. Louis 10, Mo.

▲ For more details circle **NED-83 G1** on enclosed inquiry slip ▲

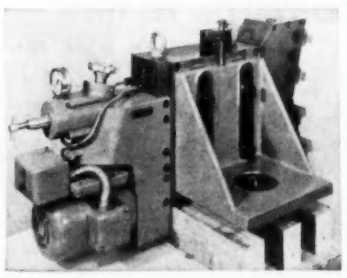
MAGNETIC DISC BRAKE
floor mounted type has its own shaft



Alignment problems are eliminated or minimized by use of the 55,200 Series magnetic disc brake, designed for applications where it is necessary to drive through the brake. The floor mounted, through-shaft unit has its own ball bearing mounted shaft. It is available in torque ratings of 1½, 3, 6, 9, 10, and 15 lb-ft. • **Stearns Electric Corp.**, 120 N. Broadway, Milwaukee 2, Wis.

▲ For more details circle **NED-84 G1** on enclosed inquiry slip ▲

SUPERFINISHING ATTACHMENT
easily installed on machine tools



Suited for external superfinishing on lathes, grinders, and other machine tools, DBP Type FA I and FA II attachments impart low pressure, reciprocating movement to an abrasive stone to remove very small particles of the work surface and eliminate profile imperfections from the previous machining operation. Stroke lengths are 0.18 and 0.20 in., respectively. The Model FA II has a continuously adjustable stroke. Stone holders are available in various sizes with one, two, or three stones. In general, Model FA I is for shafts up to 2 in., and FA II for up to 8-in. diameters. • **Engineering Imports**, Box 557, Olean, N. Y.

▲ For more details circle **NED-85 G1** on enclosed inquiry slip ▲

MOLYKOTE® M-88
BONDED LUBRICANT COATING

FREE SAMPLE!

Handy Applicator Bottle • Enough Lubricant to coat parts for evaluation • Absolutely FREE! • New industrial lubricating technique • Simply apply like a paint • Allow to air dry • Provides 100% safety against galling and seizing • Smooth, protective lubricating film bonds to most surfaces • Lifetime lubrication in many applications • Mail the coupon today.

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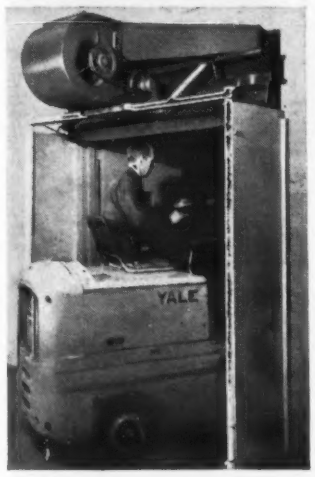
The Alpha-Molykote Corp., 65 Harvard Ave., Stamford, Conn.
Please send me a FREE SAMPLE of MOLYKOTE M-88. NED-7

Name_____ Title_____
Company_____
Address_____
City_____ Zone_____ State_____

▲ For more details circle **NED-86 G1** on enclosed inquiry slip ▲

AIR ISOLATOR*

. . . opens doorways to unlimited traffic while screening out heat, cold, humidity, dust, odors, insects.



Forms a shield between areas of different temperature or humidity.

Provides high velocity curtain of vertical air across open doorways.

Permits unlimited traffic. Repels dust, cold, heat, odors or insects.

Broad application: Manufacturing, general industry, warehousing, food processing or laboratories.

*Registered trademark and product of Lehigh, Inc.

For complete information write today to Jamison Cold Storage Door Co., Hagerstown, Md.

JAMISON
COLD STORAGE DOORS

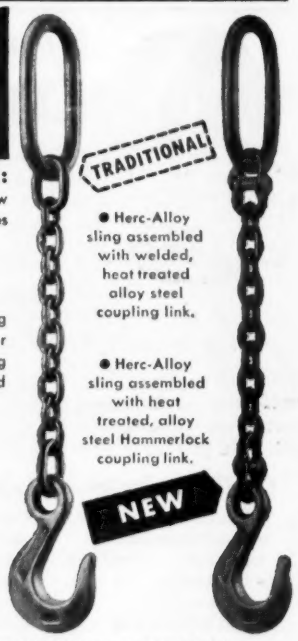
▲ For more details circle **NED-87 G1** on enclosed inquiry slip ▲

HERC-ALLOY®
. . . the original alloy steel chain

TO SERVE YOU BETTER:
Herc-Alloy chain assemblies can now be ordered with either of two types of coupling links.

Hammerlok®

the "do-it-yourself" reusable coupling link that enables you to assemble or rebuild your own Herc-Alloy sling chains with all components furnished by your local distributor.



• Herc-Alloy sling assembled with welded, heat treated alloy steel coupling link.

• Herc-Alloy sling assembled with heat treated, alloy steel Hammerlock coupling link.

CALL YOUR CM CHAIN DISTRIBUTOR or write for helpful literature on alloy chain assembly, care, use and inspection.

RUGGED • DURABLE CM CHAIN

COLUMBUS McKINNON CHAIN DIVISION
COLUMBUS McKINNON CORPORATION
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NEW YORK (Mountainside, N. J.) • CHICAGO
CLEVELAND • SAN FRANCISCO (Factory Branch)
In Canada: **Columbus McKinnon Limited, St. Catharines, Ontario**

▲ For more details circle **NED-88 G1** on enclosed inquiry slip ▲

NOW YOU TOO CAN BE SURE! INSTALL SECO LINE TESTERS AND MAKE EASY, PERIODIC CHECKS

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BE PROTECTED NOT NEGLECTED

PLEASE SEND FREE LITERATURE
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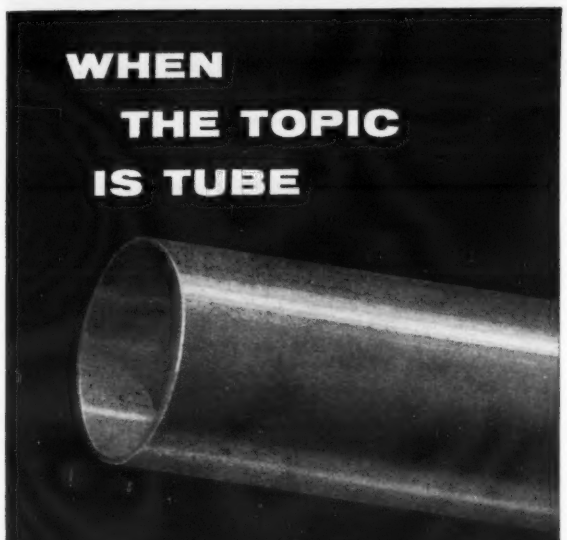
Address_____
City_____ State_____
Signed_____

***SECO* MANUFACTURING CO.**
4461 W. JEFFERSON • DETROIT 9, MICH.

▲ For more details circle **NED-89 G1** on enclosed inquiry slip ▲

WHEN THE TOPIC IS TUBE



LET'S TALK

MADE IN U.S.A. TO THE STANDARDS OF AMERICAN INDUSTRY

WOLVERINE TUBE
DIVISION OF
Calumet & Hecla, Inc.
DEPT. O, 17270 SOUTHFIELD RD., ALLEN PARK, MICH.
TUBEMANSHIP in Copper—Copper Alloys—Aluminum—Special Metals

For more details circle NED-90 G1 on enclosed inquiry slip

New
Dri-Kool
Cuts Grinding Costs

- More metal removed, faster
- Less friction
- Better finished product

Dri-Kool improves the wheel of your choice

Some experts say, "Change the wheel". Dri-Kool performs on the wheel of your choice. Dri-Kool is the result of a patented process suspending synthetic colloidal graphite in a non-toxic, volatile carrier.

Easy To Treat—One Treatment Lasts For The Life Of The Wheel.

- Less Friction
- Less Pressure Required
- Less Heat
- Less Loading
- Less Glazing
- Less Heat Checking
- Less Down Time
- Less Dressing
- More Parts Between Dressings
- Faster Cooler Grinding
- Wheels Hold Sharp Corners Longer
- Better Micro Finish

Longer wheel life more than pays the cost.

Write for literature and prices
KING GRAPHITE PRODUCTS, Inc.
21949 S. Telegraph Rd., Trenton, Michigan

NOTE: Resenoid wheels require special handling. For special problems consult our Engineering Dept. —Send complete details for quick response.

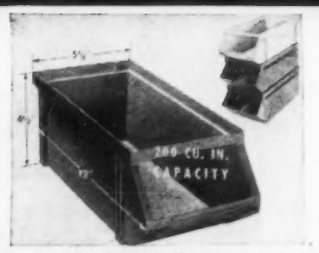
Ask about famous KGP-5EO for all water coolants, wet grinding, milling, drilling, etc.

DISTRIBUTORS Write for details

For more details circle NED-91 G1 on enclosed inquiry slip

NEW, RUGGED PLASTIC STACKBINS

- Stack Securely One Upon The Other
- Provide Fast Positive Content Identification
- Withstand Rough Usage in Shop and Stockroom



Fast content identification — Molded card holder across lip. Flexible — simple to change and expand in storage, handling and assembly of small parts. Bins can be securely stacked one upon the other — can be interstacked with same size steel Stackbins — can be used with corresponding size Stackracks in any desired arrangement. Stacking rim reinforces front — assures positive stacking — prevents buckling and collapsing.

Rugged, polypropylene construction — lightweight, non-corrosive, waterproof, easy-to-clean.

FREE FACTS! Write for new bulletin and prices. Delivery from stock. All Stackbin products sold direct.

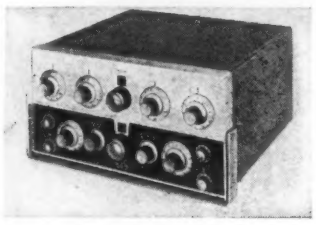
STACKBIN CORP. 1081 Main St., Pawtucket, R. I.

Mfgd. and sold in Canada exclusively by Wickware-Stackbin, Ltd., Perth

STACKBIN® SYSTEM
"Stacked and Still Accessible"

For more details circle NED-92 G1 on enclosed inquiry slip

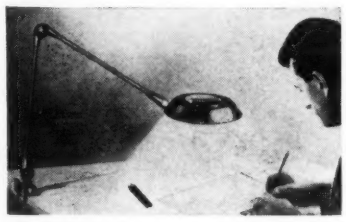
BALANCING COMPUTER
for single and two-plane operations



All calculations are taken out of balancing operations when this computer is used in conjunction with a vibration analyzer. It can be employed on both single and two-plane balancing operations for both in-place and production balancing of rotating parts. Operator feeds frequency, amplitude, and phase of vibration caused by unbalance as determined by the analyzer into the computer. Manipulation of the dials determines the location and amount of compensating weight to be added or removed. Instrument reportedly reduces balancing time by as much as 80 per cent. • **International Research & Development Corp.**, Worthington, Ohio.

For more details circle NED-93 G1 on enclosed inquiry slip

LIGHT-MAGNIFIER
provides shadow-free light



Two clamp type light-magnifiers for mounting on tables, benches, machines, or walls are equipped with a 5-in. lens and an 8-in. circular 22-w fluorescent light. Cool, shadow-free light and undistorted magnification are provided over the working area. Model 100 has two extension arms, a 24-in. reach, and 360-degree rotation. Model 104 has one extension arm and a 38-in. reach. • **Boyer-Campbell Co.**, Safety Dept., 801 W. Baltimore St., Detroit 2, Mich.

For more details circle NED-94 G1 on enclosed inquiry slip

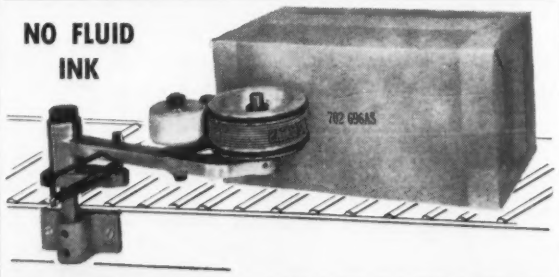
CONVEYOR BELTING
for abrasive bulk materials

Crushed stone, sand, gravel, grain, and other bulk materials are handled efficiently on Black Giant conveyor belt which withstands abrasion. Virtually one belt within another, it is doubled stitched. The inner plies are sewed separately, after which the outer belt is attached with a seam in the center so that the belt has round edges. Surface is treated with gums that are mechanically forced into the belt while under tension. Pliability is retained, and a smooth surface is assured. • **Pioneer Belting & Conveyor Equipment Corp.**, 223 Lindberg St., Griffith, Ind.

For more details circle NED-95 G1 on enclosed inquiry slip

NOW! PORELON CONVEYOR LINE MARKING

NO FLUID INK



THE PRYOR ROCKET

- Trouble free, non-stop "friction" operation—self inking up to 150,000 impressions
- Interchangeable rubber type. Easy-to-read impressions. Quick copy changes.
- Surprising low cost—saves expensive hand marking or large inventories of pre-printed cartons
- New simplified design—easier disassembly and inking. Rocket 1 prints up to 1 inch height. Rocket 2 prints up to 2 in. height
- Durable aluminum construction.

Write for FREE trial—specify model

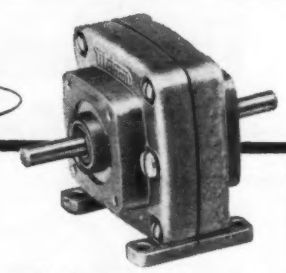
IMPRINTS CODING, DATES, DATA ON:
- CARTONS
- BAGS
- ROLLS
- CANS
- DRUMS

Do you have a marking problem? Consult us.

PRYOR MARKING PRODUCTS
434 S. Wabash Ave., Chicago 4, Ill.
Some sales territories open for qualified representatives

For more details circle NED-96 G1 on enclosed inquiry slip

FROM Metron



A PART OR A PACKAGE

A PART: *Bantam speed changers—a small size precision workhorse*

RATIOS: 646 from 1:1 to 85184:1
HORSEPOWER: 0.1 maximum
TORQUE: 130 oz-in
SPEED: 10,000 RPM maximum
BACKLASH: 15′ maximum (Series 11)
WEIGHT: 16 to 45 oz depending upon ratio
BEARINGS: double, heavy-duty ball
DELIVERY: 10 days

A PACKAGE: Bantam speed changers are only one product in Metron's complete line of small speed changing components. Call on our engineers for design help with your speed changing or control problems. Tell us what *results* you're after—what your inputs and loads are. We'll come up with an output package to do the job efficiently and economically. Send your prints today!

Metron
Metron Instrument Co.
432 Lincoln · Denver 3, Colo.
PE 3-3764 · TWX: DN 194

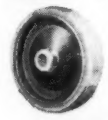
For more details circle NED-97 G1 on enclosed inquiry slip

DICO HAS THE WHEEL FOR THE JOB!

One-piece, Moulded Rubber, Oil impregnated bearing Wheels for Casters, Mowers, Hand Trucks, etc.

Popular sizes of Ball or Oil impregnated bearing, cushion tired "Light Industrial" Wheels for Mowers, Carts and light portable equipment.

6x2.00, 8x2.50, 10x2.50-2.75, 12x3.00 and 16x4.00 "Heavy Duty," Roller Bearing, welded-in hub, cushion or solid rubber tired Wheels. Also Medium Duty, Ball Bearing 10x2.50-2.75 type.


Dico "H.D." indestructible pressed steel Wheels with "Vulcanized-on" rubber tires. Roller bearings in planish sleeve. "Standard" Cushion of "E-Z" Rolling rubber tread, for Hand or Platform Trucks and heavy equipment.

Popular 500 Series 6" rim Demountable Pneumatic Wheels for Low Speed Industrial or High Speed Service. Takes 12.6"—14.6" and 17.0" outside diameter tires.

300 Series, 8" drop center rim, "welded-in" hub, 2.50" rim width Low and High Speed Wheels for 4.80-4.00x8 tires. Also 1700 Series with 3.75" wide base rim for either 4.80-4.00x8 or 5.70-5.00x8 tires.

5 BOLTS
8", 9", 12" DEMOUNTABLE HIGH SPEED WHEELS

DICO
Also Manufactures The Famous
Surg-O-Matic
TRAILER BRAKE *and the* "INVERSE ACTION" SUSPENSION SYSTEM

DICO
Write us for prices, specifications, literature, etc.
200 S.W. 16TH ST. • DES MOINES 5, IOWA

For more details circle NED-98 G1 on enclosed inquiry slip

The SAFE cleaner for electric motors

SAFETY SOLVENT DEGREASER

Safe from toxic fumes and fire!

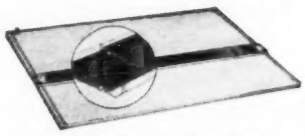
Approximately 25 times safer than carbon tetrachloride! SS-25 has a dielectric constant of 25,000 volts . . . with none of the fire hazards of petroleum products such as kerosene and naphtha. Local fire marshals and plant safety engineers endorse SS-25 because of its non-flammable qualities . . . ease of use for spray or immersion cleaning.

- no flash at the boiling point!
- corrosion free – residue on drying zero!
- safe for skin
- removes grease and oils without damage to surface metal, paint or rubber
- prevents shorting of the commutator
- increases life of brushes
- prevents bearings from becoming clogged with grease and dirt

NATIONAL CHEMSEARCH CORP.
2417 Commerce Street, Dallas, Texas
Offices in: Los Angeles • St. Louis • New York

For more details circle NED-99 G1 on enclosed inquiry slip

MAYLINE



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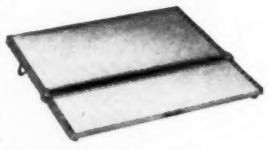
Choose Mayline Drafting Equipment

With Mayline drafting furniture and equipment you get quality workmanship and materials, high performance, durability, and pleasing appearance. All products discussed in Catalog 11. Write for your copy today.



PROFESSIONAL DRAWING KIT

7803-C MASTER

Mayline Co., Inc.

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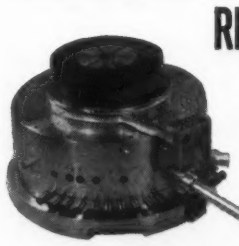
MAYLINE

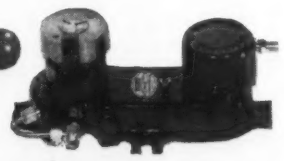
For more details circle NED-100 G1 on enclosed inquiry slip

REDMER AIR DEVICES . .



REDMER INDEX CHUCK

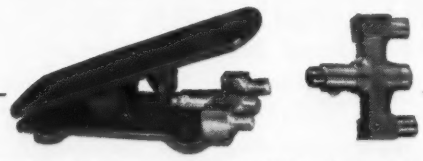
with air operated collet. The REDMER Index Chuck Model No. RC-5 has 12 indexing positions and collet capacity of 1/16" to 2". Uses Brown & Sharpe type collets No. 22 and No. 11.



The REDMER Collet Air Chuck

The REDMER Collet Air Chuck is an air-operated collet holding fixture using Brown & Sharpe type collets. Equipped with air ejection for oil flushing. Capacities 1/16" to 3½".

The Redmer Foot Control and Valve



The REDMER Foot Control and Valve reduces operator fatigue in all cases where air control is necessary. Valve is a brass casting useable as a separate unit with cam operations. Foot Control No. FC-28; valve No. V-29.

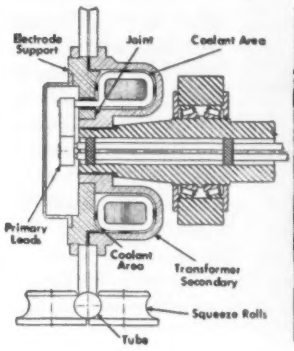
REDMER AIR DEVICES, Inc.

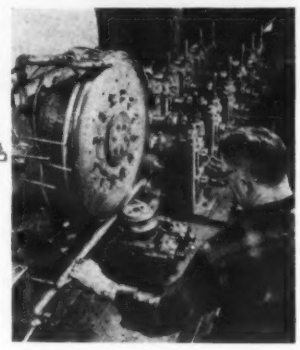
P. O. Box 12229 7100 — 30th Ave., North
St. Petersburg 33, Florida

For more details circle NED-101 G1 on enclosed inquiry slip

RESISTANCE PIPE WELDER
vapor-cooled toroidal transformer increases production 60 per cent

Usable on existing as well as new ferrous and nonferrous pipe and tube mills, Type-V vapor-cooled electric resistance welding head increases pipe production as much as 60 per cent over conventional equipment under identical power input and operating speeds. Or, identical speeds are attained at greatly reduced power requirements.

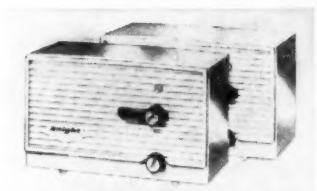




Compactness and efficiency result from a new toroidal transformer in which the case becomes the secondary. A nontoxic fluorocarbon is sealed in the transformer to assure efficient heat transfer, eliminate hot spots, and maintain high electrical efficiency. Further contributing to the increased output is the elimination of the secondary conductor system. The current is transferred directly to the electrode which is mounted on the transformer secondary. The entire unit is one-third smaller than conventional units, and the transformer has been reduced in size by 75 per cent. Overhung design requires only one bearing. At present, the head is available in 125-kva rating, but units rated up to 5000 kva for 9/16-in. wall pipe as large are 25 in. are in the development stage. • **Yoder Co.,** 5500 Walworth Ave., Cleveland 2, Ohio.

For more details circle NED-102 G1 on enclosed inquiry slip

WIRELESS INTERCOM KIT
is simple, low-cost system



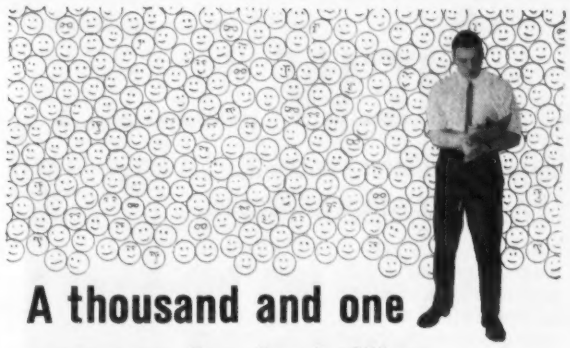
Offered in low-cost kit form, Knight-Kit wireless intercommunication system is plugged into an ac outlet. It features a squelch circuit that prevents power line noise and static during stand-by. An adjustable frequency control permits setting up separate systems on different frequencies to operate independently of one another. A two-station system lists for $37.90, with additional single stations at $18.95. • **Allied Radio Corp.,** 100 N. Western Ave., Chicago 80, Ill.

For more details circle NED-103 G1 on enclosed inquiry slip

SOLD BY LEADING INDUSTRIAL DISTRIBUTORS

THE COLUMBIAN VISE & MFG. CO. • CLEVELAND 4, OHIO

For more details circle NED-104 G1 on enclosed inquiry slip



A thousand and one reasons for installing USS Multigrip Floor Plate

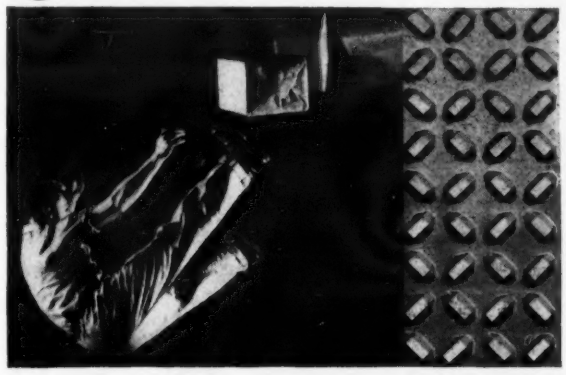
A thousand employees are a thousand reasons for installing USS Multigrip Floor Plate. You'll be protecting yourself, too. A rolled steel plate of quality, Multigrip gives positive traction, wet or dry. Protects floors with little wear or maintenance. Won't chip, splinter, or crack. You get fast delivery of any size from your Steel Service Center. For further information, write United States Steel, 525 William Penn Place, Pittsburgh 30, Pennsylvania.

United States Steel Corporation • Tennessee Coal and Iron Division • Columbia-Geneva Steel Division • United States Steel Export Company

United States Steel USS TRADEMARK

For more details circle NED-105 G1 on enclosed inquiry slip

This mark tells you a product is made of modern, dependable Steel.



$100,000 for a fall! *It's true that slips cost more than Multigrip.* Companies have been sued for $100,000 or more because of falls. Fortunately the average cost is less than this but many settlements run over $1,000.

Falls account for about 1 in 5 industrial injuries, but you can help eliminate many of the danger spots by starting a definite program of installing USS Multigrip Floor Plate on machine shop floors, aisles, cat-walks, stairs and other accident-prone areas. Workers like Multigrip—and so does management. For information, write United States Steel, 525 William Penn Place, Pittsburgh 30, Pennsylvania.

United States Steel USS TRADEMARK

For more details circle NED-106 G1 on enclosed inquiry slip

THIS FREE BOOK COULD HELP PREVENT AN ACCIDENT WHERE YOU WORK

United States Steel
525 William Penn Place
Pittsburgh 30, Pennsylvania

Please send me____ copies of your free booklet, "USS Multigrip."

Name_____

Firm_____ Address_____

City_____ Zone____ State_____

United States Steel USS TRADEMARK

For more details circle NED-107 G1 on enclosed inquiry slip

NEW

Highest-rated, lowest-priced ($11.95 Retail) 2½ lb. dry chemical extinguisher

14" HIGH

Now – thanks to the new Kidde Kompact–here's high-power fire protection at a rock-bottom price! Highest-rated, lowest-priced 2½ lb. dry chemical extinguisher on the market, the new pressurized Kidde Kompact packs as much fire-killing power as extinguishers costing twice the price. Equal to eight one-quart carbon tet units, the new Kidde Kompact mounts snugly, works simply–just lift the handle and press the lever.

And... there's no recharging needed. Just unscrew the used cylinder, replace with another, only $3.95. At the low, low price of just $11.95, no one should be without a Kidde Kompact. U.L. and U.S.C.G.-approved. For complete information, see your dealer or write Kidde today!

Kidde

Industrial and Marine Division
Walter Kidde & Company, Inc.
724 Main St., Belleville 9, N. J.
Walter Kidde & Company of Canada Ltd.
Montreal — Toronto — Vancouver

▲ For more details circle **NED-108 G1** on enclosed inquiry slip ▲

"One-Man Cleaning Squad" Shaves Costs

GOES ANYWHERE--WORKS FAST

BLOWS
VACUUMS
SPRAYS
DRIES*

IDEAL

HAND-TYPE CLEANER

Pick the hardest cleaning jobs in your plant *or* front office. Machinery, storage bins, floors, scrap collection—even draperies, rugs and venetian blinds. This cleaner was built to handle them all—with least effort and in least time!

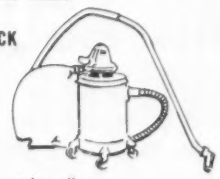
You get up to 26,500 feet per minute dry air blowing velocity (Heavy-Duty model) to remove chips and litter from difficult spots around machines and shelves. Yet it's gentled by Ideal air-engineering to be harmless to most sensitive equipment. Simple, low-cost attachments make spraying and drying* just as easy.

For vacuum cleaning, there are attachments, nozzles, hoses to handle every pick-up chore. Light-weight, balanced design minimizes fatigue. Three models: 1-1/3, 2/3, and 2/5 HP. You pick the power and the attachments to do your job best—and at lowest initial and operating cost.

*2/5 H.P. Model only available with heater nozzle.

FOR WET OR DRY PICK-UP LOW-COST TANK CONVERSION PACK

Hand-type unit slips onto tank to convert any Heavy or Medium Duty model into a powerful Tank-Type cleaner. Water and cleaning solutions stay in the 12-gallon tank, dust and dirt pass into the dust-tight bag. Pack consists of tank and bag. Attachments extra.



Built to last for years and years of heavy service, all IDEAL Cleaners carry a written guarantee for your protection.

SOLD THROUGH AMERICA'S LEADING DISTRIBUTORS
In Canada: Irving Smith, Ltd., Montreal

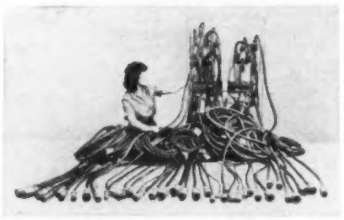
Get the Value-Facts Now! Mail Coupon

IDEAL INDUSTRIES, Inc., 1032-G Park Avenue, Sycamore, Illinois
Send catalog data on IDEAL Cleaners and Blowers

Name_____
Company_____
Address_____
City_____ Zone____ State____

▲ For more details circle **NED-109 G1** on enclosed inquiry slip ▲

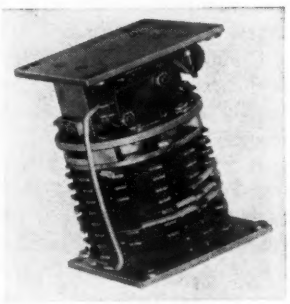
CABLE ASSEMBLIES
tailor-made in lengths under 250 ft



Economical assembly of conductors into tailored cables with neoprene or PVC jackets is possible in lengths under 250 ft. Assemblies can be made in a wide range of sizes and number of conductors. Neoprene or PVC jackets, with or without Mylar covering, meet military specifications, have uniform wall thickness, and are waterproof. Fanouts with molded junctions are available and eliminate junction boxes. Coaxial, triaxial, or any combination of conductors can be used. • **Electro-Mechanics, Inc.,** 160 Whiting St., New Britain, Conn.

▲ For more details circle **NED-110 G1** on enclosed inquiry slip ▲

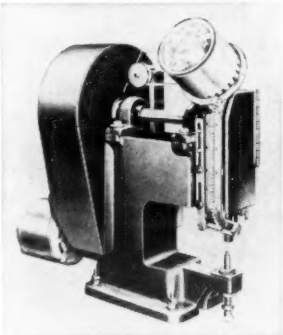
ROTARY SOLENOID
resists axial vibration and shock



A balanced rotor is actuated in this rotary solenoid, now available for industrial use. No linkages are required to convert linear motion to rotary motion. Unit is inherently resistant to mechanical environments such as axial vibration and shock. It is made to specific requirements and is shown rigged as a stepping device. • **Singer Mfg. Co.,** Singer-Bridgeport Div., 915 Pembroke St., Bridgeport 8, Conn.

▲ For more details circle **NED-111 G1** on enclosed inquiry slip ▲

TUBULAR RIVETER
for electrical, metal fabrication



Rivets ranging in diameter up to ⅛-in. and in lengths from 1/16 to ½ in. are inserted and clinched automatically on this Etco 600 tubular riveting machine. It will also feed and install all makes of eyelets and grommets. No change in tooling is needed to handle fasteners of varying lengths with the same barrel diameter. Easily changed feed tracks accommodate different barrel diameters. A setting force of 3000 ft-lb is delivered by the 40-lb flywheel which is driven by a ⅓-hp 115-v ac motor. • **Eyelet Tool Co.,** 31 Carleton St., Cambridge 42, Mass.

▲ For more details circle **NED-112 G1** on enclosed inquiry slip ▲

One man cuts and handles big panels–in half the time

...with BENNETT 2-WAY PANEL SAW

The low-cost saw that cuts and rips big panels, saves time and money. Accurate, safe, uses 75% less floor space. Now made and sold by DeWalt, Inc.

DEWALT, Inc., Dept. NE-761, Lancaster, Pa.
A *Black & Decker* Subsidiary

☐ Send me full details on Bennett Panel Saw.
☐ Send me free, 16-page DeWalt catalog.

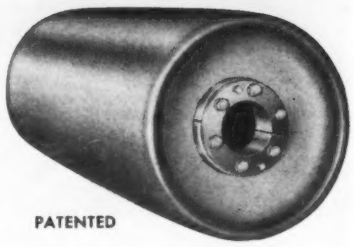
Name_____
Address_____
City_____ State____

▲ For more details circle **NED-113 G1** on enclosed inquiry slip ▲

NEW CURVE CROWN® STEPHENS-ADAMSON — ONE PIECE ALL STEEL **PULLEYS**

FEATURING EXCLUSIVE "SPUN END" CONSTRUCTION

"SPUN END" CONSTRUCTION—Eliminates weldments in areas of high stress concentration, a major source of fatigue, warping and trouble. "Spun End" construction allows the placement of maximum metal thickness at end plate bore reducing unit pressures of radial loads while providing thin plate flexibility to accommodate shaft deflections.



PATENTED

CURVE CROWN DESIGN — Accurately formed CURVE CROWN on outer ends of rim eliminates conventional center peak —a high point for belt stretch and wear—while increasing belt training effect more than 100%.

SQUEEZE LOCK HUB—Design effectively transfers loads from rim to hub and from hub to shaft. Hub provides for full torque transmission without the use of keyways and eliminates distorting loads against pulley "Spun End." The SQUEEZE LOCK Hub exerts locking forces in two directions —to both shaft and pulley end plates— through a self-contained hub.

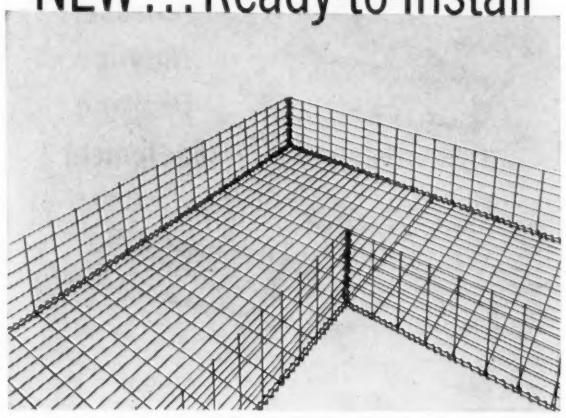
S-A

WRITE FOR BULLETIN 1160

PRODUCTS DIVISION
STEPHENS-ADAMSON MFG. CO.
12 RIDGEWAY AVENUE • AURORA, ILLINOIS
PLANTS LOCATED IN:
LOS ANGELES, CALIF. • CLARKSDALE, MISS.
BELLEVILLE, ONTARIO • MEXICO CITY, D. F.

▲ For more details circle **NED-114 G1** on enclosed inquiry slip ▲

NEW...Ready-to-Install



WIRE-SHIELD
Conveyor Guards

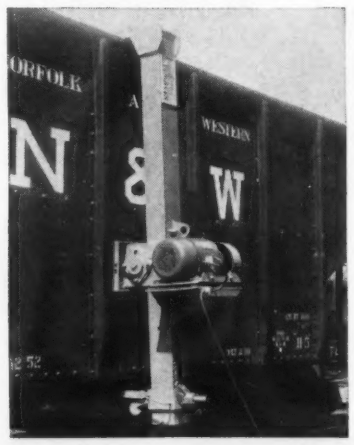
Save costs with these easily installed WIRE-SHIELD Conveyor Guards. Fabricated 2 x 4 welded steel mesh in standard 8 ft. lengths with a wide choice of widths and side heights. Finished in aluminum. Provides protection for all conveyors . . . straight, inclined and with 90° turns. Shipped ready-to-install.

WRITE FOR INFORMATION

SPRINGPORT Steel Products Co.
SPRINGPORT, MICHIGAN

02

▲ For more details circle **NED-115 G1** on enclosed inquiry slip ▲



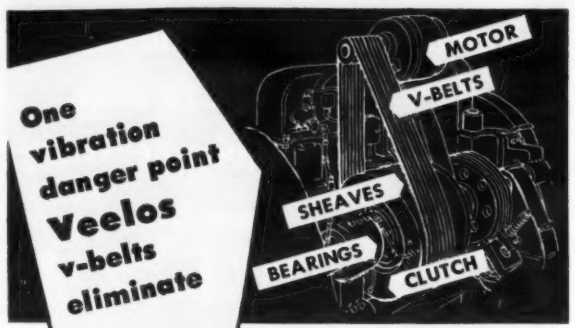
NATIONAL CAR SHAKER

will unload bulk material from hopper cars quickly, easily, safely, will save you money. Write today for full information.

OVER 1300 IN USE

NATIONAL CONVEYOR & SUPPLY CO.
361 HARDING AVE.
CHICAGO 24, ILL.

▲ For more details circle **NED-116 G1** on enclosed inquiry slip ▲



On any drive there are five vibration danger points—motor, bearings, clutch, sheaves and v-belts. One, the vibration from v-belts, can be eliminated by a simple switch to Veelos. An easy-to-make test with the Veelos Vibration Analyzer measures one belt against another. It will prove to you that Veelos cuts v-belt vibration up to 89% more than any other type of v-belt.

Ask your distributor—or write direct—to have a Veelos salesman demonstrate how vibration-free Veelos v-belts on your drives will bring higher production, higher quality output with less wear on bearings and machines.

SEND FOR your free copy of the Veelos Data Book

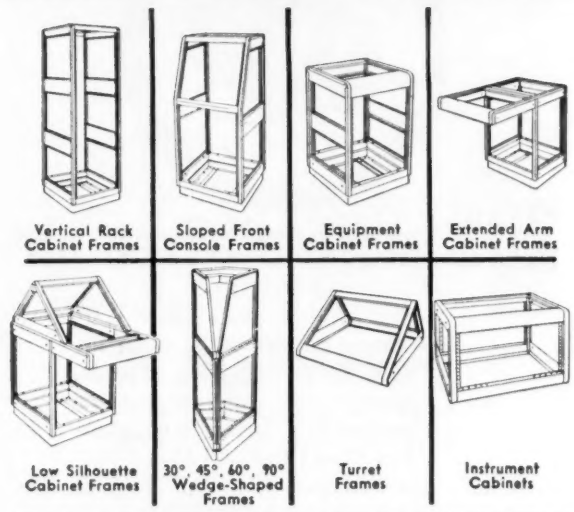
VEELOS THE BALANCED LINK V-BELT

MANHEIM
Manufacturing & Belting Company
Manheim 4, Penna.

Veelos is known as Veelink outside U.S.A.

For more details circle NED-117 G1 on enclosed inquiry slip

Designed for Beauty...Built for Duty
EMCOR® METAL CABINETS



Standard side panels, doors, drawers and accessories available to assemble enclosures to meet any requirement.

WRITE TODAY FOR CATALOG
EMCOR-The Original Modular Enclosure System By
INGERSOLL PRODUCTS
Division of Borg-Warner Corporation
1000 W. 120th ST. • DEPT. 1247 • CHICAGO 43, ILL.
BORG-WARNER

For more details circle NED-118 G1 on enclosed inquiry slip

HERE'S WHY
LINK-BELT CONVEYOR TROLLEYS

RIDE SMOOTHER . . . LONGER

1. **EXTRA-LONG LIFE** results from carburizing and heat treating wheels, machined from steel tubing.
2. **FRICTION IS MINIMIZED** because cages space steel balls accurately.
3. **FREE-ROLLING ACTION AND HIGH CAPACITY** are benefits assured by precision-ground raceways.
4. **PRESS-FITTING** of bolts or rivets is another long-life feature.
5. **NO WHEEL "WOBBLE".** Forged steel brackets provide strength to keep trolleys aligned.

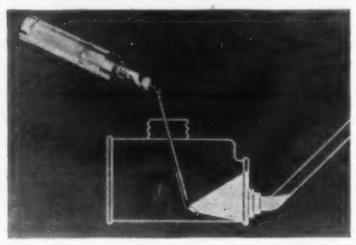
15,005

NEW TROLLEY BOOK 2636 is now available. Send for your copy today.

LINK-BELT
BALL BEARING CONVEYOR TROLLEYS
LINK-BELT COMPANY, Prudential Plaza, Dept. NED, Chicago 1, Ill.

For more details circle NED-119 G1 on enclosed inquiry slip

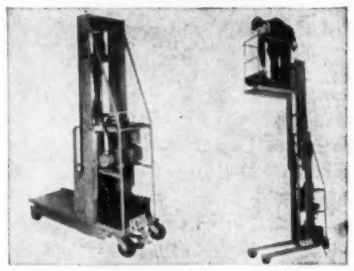
INSPECTION LIGHT
equipped with rotating mirror



Walls of bores with a minimum diameter of ¾ in. are easily inspected by the No. 404 inspection light which has a rotating mirror mounted at the end of a shaft below its lamp. Mounted at a 45-degree angle to the shaft to provide right angle vision, the mirror is rotated 360 degrees by a knurled collar. Shaft length is 8 in., with longer lengths on special order. It is powered by flashlight dry cells, rechargeable batteries, or through transformer from 110 or 220 v ac. • **Welch Allyn, Inc.**, 160 Jordan Rd., Skaneateles Falls, N. Y.

For more details circle NED-120 G1 on enclosed inquiry slip

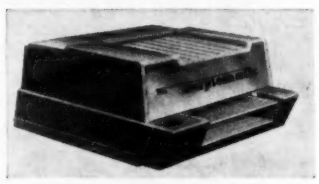
PLATFORM LIFT
places worker 120 in. above floor



Battery - operated telescoping platform lift will elevate a worker to any height from 8 to 120 in. for maintenance or other jobs. The portable hydraulic unit is operated through pushbutton controls from the 20 x 30-in. platform. It can lift a 750-lb load and has several safety features. • **Grand Specialties Co.**, 3101 W. Grand Ave., Chicago 22, Ill.

For more details circle NED-121 G1 on enclosed inquiry slip

AUTOMATIC PHOTOCOPIER
makes four prints per minute



Clear black-and-white copies of any color original up to 11 in. wide by any length are made automatically by the Amptomatic photocopier. Machine turns itself on, supplies the copy paper, makes exposure, peels away the negative, adjusts itself to any length original, trims, and delivers developed prints at rate of four copies per minute. Original is simply fed into the machine and, after exposure, is instantly returned to the operator. A peeled, ready-to-use positive copy is ejected from the top of the machine. Unit weighs only 65 lb and stores 150 ft of copy paper on rolls. Price is about $600. • **Ampto, Inc.**, Hicks Avenue, Newton, N. J.

For more details circle NED-122 G1 on enclosed inquiry slip

put real teeth into your cutting!

SAW CLEANER—the cut is finished when you are finished cutting! No sanding, no finishing required. 2½" diameter saw blade gives finished, mill-edge cuts up to ⅝" in metal laminates such as Mirawal, AllianceWall, ColorWall, Met-L-Wood and Armorply; well as Masonite and Plywood.

SAW FASTER—heavy duty 110 v. AC/DC portable motor. Zip thru fiberglass, reinforced plastics, plastic laminates—3/16" aluminum—even 16 gauge steel. **Ball bearing drive throughout** assures smooth, trouble-free operation.

Excellent for metal pan type acoustical tile.

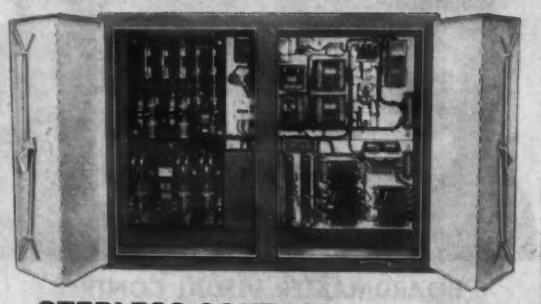
Write for Catalog E-67

KS-3AM Panel Master Saw

THE KETT TOOL COMPANY
5051 Madison Rd.
Cincinnati 27, Ohio

For more details circle NED-123 G1 on enclosed inquiry slip

PRECISION HANDLING OF ALL LOADS with new EC&M AC STATA-Hoist Control



- **STEPLESS CONTROL** —with fast response over entire speed range
- **FLOAT CONTROL** —for pinpoint control at slow speeds
- **STATIC COMPONENTS** —for reliable operation and minimum maintenance

Write for Bulletin 6401 • Square D Company, EC&M Division, 4500 Lee Road, Cleveland 28, Ohio

SQUARE D COMPANY
EC&M DIVISION • CLEVELAND 28, OHIO
wherever electricity is distributed and controlled 5352

For more details circle NED-124 G1 on enclosed inquiry slip

Plug-in Power!

QMB
Fusible Distribution Panelboards!

PLUG-IN CONSTRUCTION! Service, additions, rearrangements go faster, cost less

HEAVY-DUTY! Rugged quality industrials like

OVER-THE-COUNTER! Your local Square D Distributor has QMB in stock—no waiting

Write for the complete QMB Panelboard story!

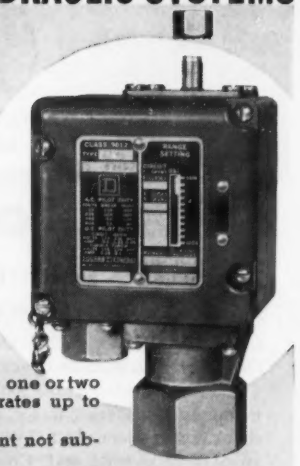
Square D Company, Mercer Road, Lexington, Ky.

SQUARE D COMPANY
wherever electricity is distributed and controlled

For more details circle NED-125 G1 on enclosed inquiry slip

NEW 15,000-lb Pressure Switch FOR HYDRAULIC SYSTEMS

Built for Tough Industrial Service—



Wide range of pressures • adjusts from 2,000 to 15,000 psi on rising pressure

Strain relief • prevents damage from shock of violent pressure surge

Oil-tight construction • gasketed construction prevents entry of oil and coolant into switch mechanism

Rugged snap-action switch • one or two pole—permits operating rates up to 300 per minute

Long life • pressure element not subject to fatigue

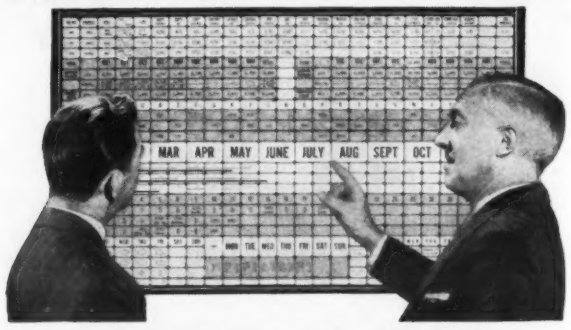
Low maintenance • indestructible piston, rugged metal case, long-life switching member, range-locking nut

Write for Bulletin 9012 ADW9. Square D Company, Bingham Road, Asheville, North Carolina

SQUARE D COMPANY
wherever electricity is distributed and controlled

For more details circle NED-126 G1 on enclosed inquiry slip

You Get Things Done Better By Seeing What's Happening



BOARDMASTER VISUAL CONTROL

- ★ Gives Graphic Picture of Your Operations in Color.
- ★ Facts at a Glance - Saves Time and Prevents Errors.
- ★ A Simple, Flexible Tool-Easily Adapted to Your Needs.
- ★ Easy to Use. Type or Write on Cards, Snap on Board.
- ★ Ideal for Production, Scheduling, Sales, Inventory, Etc.
- ★ Compact, Attractive. Made of Metal. 500,000 in Use.

Complete Price **$49.50** Including Cards

FREE 24-Page ILLUSTRATED BOOKLET N-200 Without Obligation

GRAPHIC SYSTEMS, Yanceyville, North Carolina

▲ For more details circle NED-127 G1 on enclosed inquiry slip ▲

Speed Tying Operations!

- ★ Cheaper than String
- ★ Faster than Tying
- ★ Sure Grip — no Knots
- ★ New Measuring Cutter

Cut tying time in half! Hanscom-Ties (colorful plastic or paper covered wire) are the fast, sure way to bundle wires, cords, coils, etc. . . . temporarily and permanently. New Measuring Cutter dispenses faster than ever! Ties are cheaper by the spool (as little as 9 ft. for a penny!)

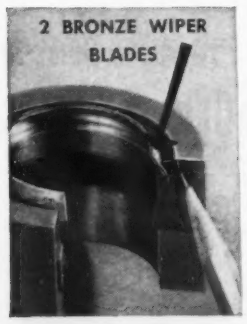
Measuring Cutter **$7.95** Complete

FREE TIE SAMPLES . . . TRY THEM YOURSELF!

Hanscom-Ties CUTTER Pats. and Pats. Pend.

H. F. HANSCOM & CO., INC., 15 Virginia Ave., Providence 5, R. I., U.S.A.

▲ For more details circle NED-128 G1 on enclosed inquiry slip ▲



SEAL-GUARD®

keeps dirt, grit, water outside your cylinders

SEAL-GUARD keeps hydraulic and pneumatic systems clean—protects rods and packings—saves hydraulic fluids. Two bronze blades scrape rod clean and throw off foreign matter as rod enters cylinder. Rubber retainer ring absorbs shock, keeps blades in full contact with rod and provides an over-all outside seal. Compact, efficient, economical. **Write E. F. Houghton & Co., 303 W. Lehigh Ave., Philadelphia 33, Pa.**

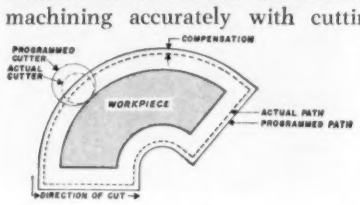
Houghton

INDUSTRY'S PARTNER IN PRODUCTION

▲ For more details circle NED-129 G1 on enclosed inquiry slip ▲

NUMERICAL CONTOURING CONTROLS with optional cutter compensation

Cutter compensation available optionally in the Dyna-Path-20 series numerical contouring controls allows machining accurately with cutting tools varying as much as 0.050 in. from the programmed diameter. Operator can thus use reground tools, or make both roughing and finishing cuts with the same tool and the same tape. Compensation system generates a secondary signal which is superimposed on the command signals which operate the machine's servo drives. The required correction is proportioned to each axis, producing a normal offset regardless of the direction or curvature of the cutter path. • **Bendix Corp.**, Industrial Controls Section, 21820 Wyoming Ave., Detroit 37, Mich.



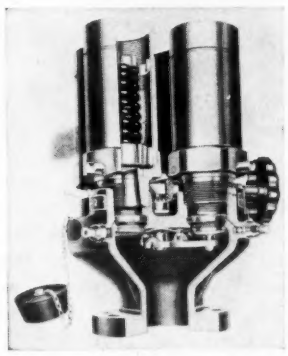
▲ For more details circle NED-130 G1 on enclosed inquiry slip ▲

MODULE RESISTOR SOCKET allows quick disconnect

Module resistor and capacitor stacks are accepted by this socket which has NEMA Grade XP chocolate insulating wafers. Cadmium plated barrel-type brass contacts remain firmly in place when module is engaged. Module can be quickly disconnected to simplify servicing. • **Mandex Mfg. Co.**, Dept. ND-5, 2614 W. 48th St., Chicago 32, Ill.

▲ For more details circle NED-131 G1 on enclosed inquiry slip ▲

RELIEF VALVE MANIFOLDS for use on pressurized containers



Uninterrupted service on LP-gas, butadiene, and other hydrocarbon pressurized storage containers is assured by this 8500 Series safety relief valve manifold. It is available with two, three, or four relief valves in threaded mountings. While storage container is under pressure, any one safety valve can be removed for servicing without loss of product or hazard. Set pressures range from 40 to 300 psig. • **Bastian-Blessing Co.**, 4201 W. Peterson Ave., Chicago 46, Ill.

▲ For more details circle NED-132 G1 on enclosed inquiry slip ▲

For all-'round deodorizing . . .

ROUNDS

Fragrant, laborless deodorant discs for urinals, bowls, garbage pails, lockers, closets

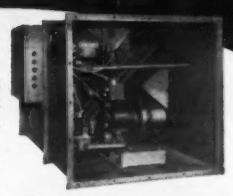
Deodoroma ROUNDS cost in use averages only a *fraction* of one cent a day. Rounds are formed under 70,000 pounds pressure: are dense and durable. Fragrance is locked in: lasts until the last particle has vaporized—there's no harsh "moth cake odor." Packed eight to the telescoping box—each Round sealed airtight—easy-to-shape Holzit wire holder in every box. For literature write to The C. B. Dolge Company, Westport, Conn.

For free sanitary survey of your premises ask your Dolge service man

Dependable DOLGE WESTPORT, CONNECTICUT

▲ For more details circle NED-133 G1 on enclosed inquiry slip ▲

Hartzell intake air units are custom engineered to your make-up air requirements



You write the specifications for the air intake equipment that meets your exact needs — and Hartzell will supply it. Hartzell intake units are assembled to your order from standard components. You get, and pay for, only the elements you need. Direct gas-fired heat unit or steam coil — filter house and filters — shutters — outlet diffusers . . . all can be included if you need them, omitted if you don't. Fans and control systems for all operating requirements are readily available.

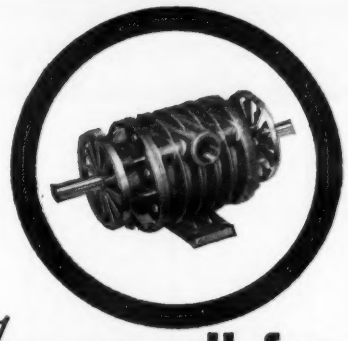
Above — Hartzell Gas-Fired Air Intake Unit (15,000 to 90,000 C.F.M.) Below — Hartzell Steam-Fired Air Intake Unit (4,000 to 36,000 C.F.M.)

For complete details on the industry's most complete, most versatile line of air intake equipment, call your nearby Hartzell field office or write for Bulletin A-117.

HARTZELL PROPELLER FAN CO. Div. of Castle Hills Corp.

62 Thomas Blvd., Piqua, Ohio — A member of AMCA

▲ For more details circle NED-134 G1 on enclosed inquiry slip ▲



20% more oil-free air

The all-new M-D DRY AIR pumps deliver 20% more air flow than previous models. Seven models deliver guaranteed oil-free dry air in constant flow from 1 to 40 CFM and provide vacuums to 25" HG or pressures up to 35 PSIG.

Aircraft quality tolerances
Factory tested • No oiling • No greasing
7 Gas-Tight Models Also Available

Write for free literature

M-D BLOWERS, Inc., RACINE, WIS.
A subsidiary of Miehle-Goss-Dexter, Inc.

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SHAPES TO RELY ON

Cylindrical, spherical, conical or tapered. Whatever the shape or shell, its reliability is better when formed by the Hackney cold drawn process. Seamless—no longitudinal welds; light weight; uniform thickness from top to bottom. Sizes: 1 qt. to 100 gal., 2" to 32" diameters. Wide choice of metals available. Write for details.

Hackney MILWAUKEE

Pressed Steel Tank Company
Manufacturer of Hackney Products
1450 S. 66th St., Milwaukee 14, Wis.
Branch offices in principal cities

CONTAINERS AND PRESSURE VESSELS FOR GASES, LIQUIDS AND SOLIDS

▲ For more details circle NED-136 G1 on enclosed inquiry slip ▲

Small rugged switch for medium loads ESCO ROTARY MULTIPOLE SWITCH

Use the ESCO TYPE A

for single-knob control of up to seven sections, up to 8 positions per section

ELECTRICAL RATING: *Continuous* — 10 amp. 125 volts.

Interrupting — Alternating Current 5 amp. 125 volts (at 0.75 PF), 3 amp. 125 volts (Lamp load).

Interrupting — Direct Current 5 amp. 30 volts (non-inductive), 1 amp. 125 volts (non-inductive), ½ amp. 125 volts Inductive (.075 henry), 2½ amp. 30 volts Inductive (.015 henry).

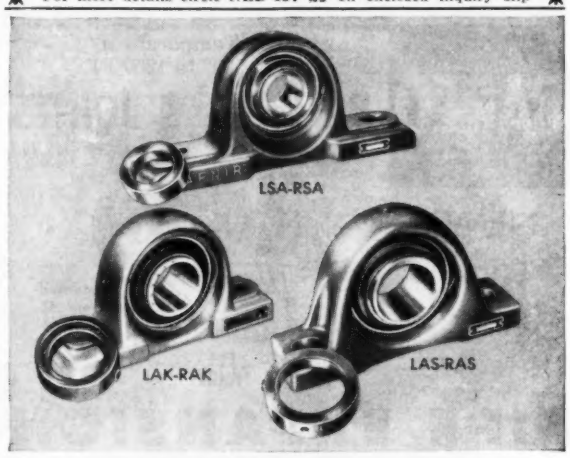
Overload — 50 operations 30 amp. 125 volts a-c (non-inductive).

Available with a wide selection of switching assemblages. Positive positioning with sturdy detent mechanism.

Write today for complete information on all ESCO rotary multipole switches.

ESCO of WEYMOUTH
ELECTRO SWITCH CORPORATION
167 KING AVE., WEYMOUTH 88, MASSACHUSETTS

▲ For more details circle **NED-137 G1** on enclosed inquiry slip ▲



FAFNIR
BALL BEARING PILLOW BLOCKS

A wide size range makes it possible for you to equip completely with Fafnir Ball Bearing Pillow Blocks when you need bearing replacements.

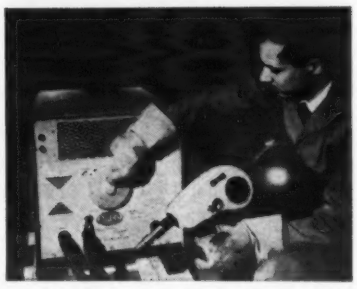
For example, the three shown here are all standard duty but built to different housing dimensions to meet various requirements. All feature the Fafnir wide inner ring ball bearing with self-locking collar for easy installation.

You have a choice of contact-type Plya-Seals (R-Series), or slinger-type Mechani-Seals (L-Series), for higher speeds. See your authorized Fafnir Distributor. Or write: The Fafnir Bearing Company, New Britain, Connecticut.

FAFNIR BALL BEARINGS

▲ For more details circle **NED-138 G1** on enclosed inquiry slip ▲

GAS-SHIELDED ARC WELDER
200-amp dc unit welds stainless



This gas-shielded metal arc welder for high-speed welding of stainless and mild steels and aluminum consists of Model AW20-E Aircomatic MIGet gun and the MIGet CAV power source rated 200 amp dc, 60 per cent duty cycle. Gun connects directly to power source and weighs only 2¾ lb. It handles 0.030 and 3/64-in. aluminum wires and 0.030, 0.035, and 0.045-in. hard wires. Numerous short-length welds can be made in confined spaces up to 50 ft from power source. The power unit provides built-in reactance for the Airco dip transfer process. • **Air Reduction Sales Co.,** 150 E. 42nd St., New York 17, N. Y.

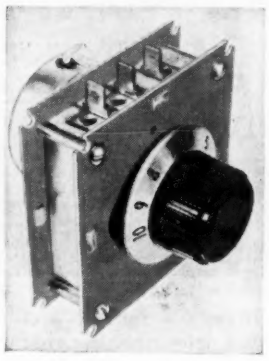
▲ For more details circle **NED-140 G1** on enclosed inquiry slip ▲

PLIER-TYPE CLAMP
applies 1600 lb of clamping force

Under normal hand pressure, Series P-1600 toggle-action plier-type clamp delivers 1600 lb of clamping force at the spindle. Plier is available with a throat depth of 2¼ in. and throat gaps of 1 3/16, 3, 4, and 6 in. They are forged from steel, heat treated, and cadmium plated. • **Lapeer Mfg. Co.,** 3053 Davison Rd., Lapeer, Mich.

▲ For more details circle **NED-141 G1** on enclosed inquiry slip ▲

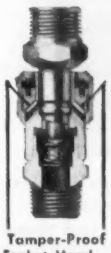
ADJUSTABLE TIMERS
have intervals from 5 sec to 5 hr



Process or production equipment, washers, dryers, automatic mixers, ovens, heaters, and vending machines are potential uses for Series 41500 manually adjustable timers. They have a precision snap-action single-pole double-throw switch, life of which is reported to be 40,000 cycles, or seven times the minimum UL requirement at rated 15-amp 115-v load. Intervals are adjustable from 5 sec to 5 hr. Unit is wired in the field to operate as a time delay mechanism or as a straight interval timer. Models are available with one to four switches in the same package size which is 3 x 3 x 1 57/64 in. The ¼-in. shaft extension is ⅞-in. Knobs and dials are available as required. • **A. W. Haydon Co.,** 232 N. Elm St., Waterbury, Conn.

▲ For more details circle **NED-142 G1** on enclosed inquiry slip ▲

ONE-WAY SHUT-OFF



Tamper-Proof Socket Head — with leak-proof, minimum wear, locking device.

- Quick connection and disconnection – as easy as plugging in your electric shaver.
- Instant automatic flow or shut-off.
- Factory assembled socket head cannot be readily damaged—or have component parts lost by casual tampering.
- Locking pins afford large area contact with Plug—reduces wear to a minimum.

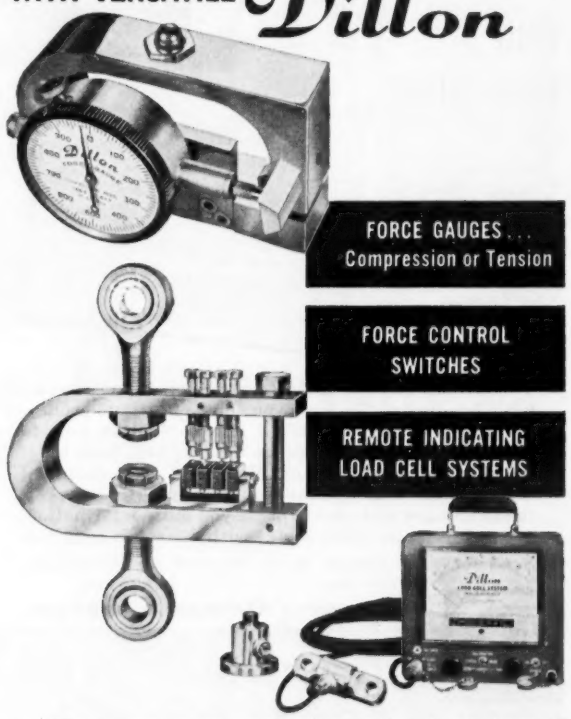
Write for Catalog — a ready reference when you want information on couplings in a hurry.

Representatives in Principal Cities ...See Yellow Pages

THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 35, OHIO

▲ For more details circle **NED-143 G1** on enclosed inquiry slip ▲

SIMPLIFY TESTING AND DESIGN WITH VERSATILE *Dillon*

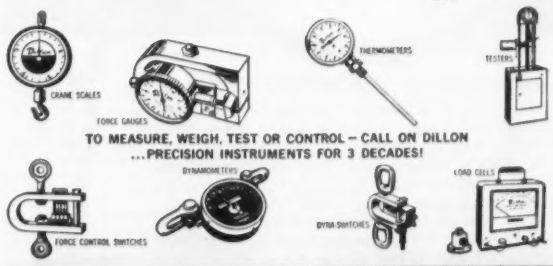


Measure and control mechanical forces ...check dangerous loads remotely!

Whether you are working in tension or compression...or if you must control a specific function at a definite load point...you'll find one of these modestly priced Dillon work tools already tailored to your needs. Secure totalized stresses *remotely* from multiple points on hazardous setups. Check the hardness of pellets. Ring warning bells, start motors, control entire automatic production lines... *literally hundreds of applications in laboratory, factory, yard and field.*

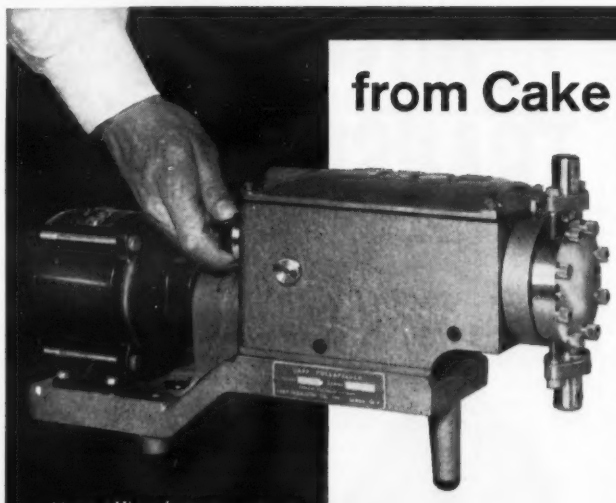
PLEASE BE SURE TO MENTION PRODUCT IN WHICH YOU ARE *SPECIFICALLY* INTERESTED. A COPY OF OUR *GENERAL* CATALOG ON *OTHER* DILLON PRODUCTS WILL BE INCLUDED.

368



W. C. *Dillon* & COMPANY, INC.
Dept. 119, 14578 Keswick Street, Van Nuys 77, Calif.
Representatives in All Principal Cities

▲ For more details circle **NED-144 G1** on enclosed inquiry slip ▲



from Cake Mixes to Crude Oil...

Processes That Need Metering Need Pulsafeeder

Our Pulsafeeder can handle an almost unlimited variety of jobs. It's used in everything from adding flavor to cake mixes to treating crude oil as it comes from wells. Whatever the job, Microflo has no peer in accurate metering and trouble-free pumping.

Thousands of Pulsafeeder metering pumps are serving laboratory, pilot plant and industrial operations. Applications include odorization, sampling, addition, metering, treating and filling.

- No stuffing box means no leakage or contamination.
- Oil submersion protects parts from corrosion and wear.
- Sealed hydraulic system for trouble-free operation.
- Rate adjustable manually or automatically when operating or idle . . . from a few drops to 15.7 GPM . . . pressures up to 7000 psig.

Write for complete specifications contained in Catalog 59
Lapp Insulator Co. Inc., Process Equipment Division, 1819 Poplar St., LeRoy, N. Y.

Lapp PULSAFEEDER
METERING PUMP

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WING moves air, fumes, smoke... faster

Wing fans and ventilators move large volumes of air rapidly and inexpensively. Easy and economical to install, they are performance proved in thousands of ventilating applications. Ruggedly built for low maintenance, long service life, they efficiently maintain comfortable atmospheres for safety and health.

Through Ducts
AXIAL FLOW FANS
Write for Bulletin AFF-61

Through the Roof
POWER ROOF VENTILATORS
Write for Bulletin PRV-61

★

Through the Wall or Window
WINGFOIL FANS
Write for Bulletin WSF-61

L. J. WING MFG. CO.
DIVISION OF AERO-FLOW DYNAMICS, INC., LINDEN, NEW JERSEY
Factories: Linden, N. J. and Montreal, Canada WC 159

▲ For more details circle NED-145 G1 on enclosed inquiry slip ▲

Packed With Information On Steam-Water Control Systems

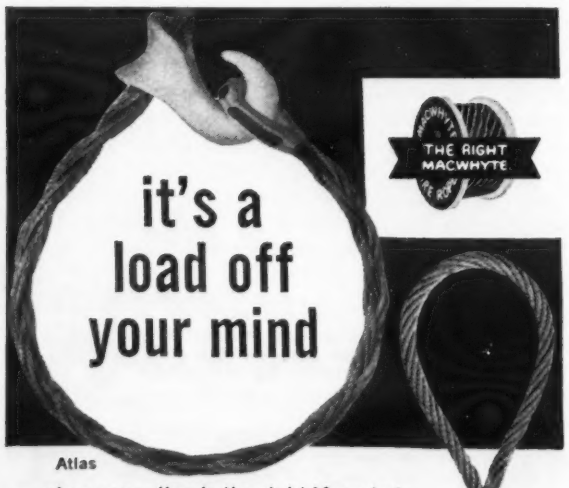
The Powers *Engineer's Manual, Steam-Water Service* has been designed to save you time, effort and money. It tells you how to install a new system or how to modify, improve or update an existing one. Individual controls are described and illustrated as a means of helping you with special applications. Handy postpaid cards are included to bring you more information, prompt recommendations or assistance when required.

Send for your manual now! It's free for the asking.

POWERS CONTROL

THE POWERS REGULATOR COMPANY
Dept. 761, Skokie 44, Illinois
In Canada:
The Powers Regulator Co. of Canada Ltd.
Downsview, Ontario

▲ For more details circle NED-146 G1 on enclosed inquiry slip ▲



it's a load off your mind

Atlas

Safe-Guard

—when your sling is the right Macwhyte

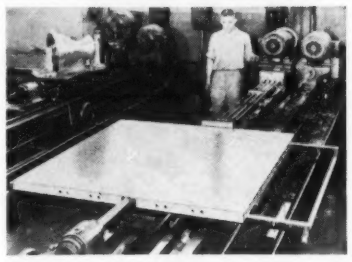
There are Macwhyte slings for all your load-handling — for a safe, sure grip. Atlas round-braided, Drew flat-braided, and Safe-Guard cable-laid slings are flexible, lightweight, kink-resistant. Also slings designed for your special needs. For complete information and capacity tables, ask for Bulletins 5308-R and 5886 Macwhyte Wire Rope Company, 2900 Fourteenth Avenue, Kenosha, Wisconsin.

254

MACWHYTE

▲ For more details circle NED-147 G1 on enclosed inquiry slip ▲

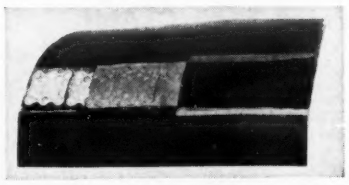
HEAT EXCHANGERS
large, drilled-from-solid units



Multiple holes on ½, 1, or 2-in. centers with depths up to 20 ft, good finish, and minimum runout can be drilled in these drilled-from-the-solid heat exchangers. They are available in stainless steel, aluminum, and other metals for plating, chemical batching, hot pressing, and other processing operations. Wide variety of flow patterns is available with all components, including fittings, mounting brackets, and electrical heating elements. • **20th Century Machine Co.**, 6070 E. 18 Mile Rd., Utica, Mich.

▲ For more details circle NED-148 G1 on enclosed inquiry slip ▲

WATERPROOF BELT SPLICE
is completed in 1½ hours



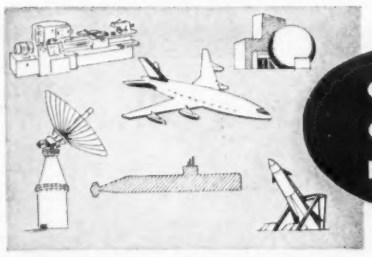
The average flat or conveyor belt can be mechanically spliced with a moistureproof joint in 1½ hours. Crescent belt plates are easily attached after a simple countersinking operation. Joint is then sealed with rubber strip which cold-vulcanizes and is protected from rot, mildew, or dirt. Pulley and idler wear is minimized. • **Crescent Fastener Co.**, 381 Park Ave. S., New York 16, N. Y.

▲ For more details circle NED-149 G1 on enclosed inquiry slip ▲

METAL FLAW DETECTOR
portable device for ferrous metals

Essentially a 14-lb U-shaped two-pole electromagnet, this portable magnetic device for detecting cracks and flaws in ferrous metals can be used in a plant or in the field. It is energized from a 6 or 12-v automobile storage battery or from a 110-v service outlet through a built-in rectifier. Unit is placed with the two poles bridging the area to be examined. Particles of ferromagnetic powder sprinkled over the 72-sq in. duplicate the outlines of any flaws present, and adhere to flaw areas after powder on normal areas is blown or brushed away. Invisible hairline cracks or flaws as deep as ½ in. below the surface are detected. • **Westinghouse Electric Corp.**, X-Ray Dept., Box 416, Baltimore 3, Md.

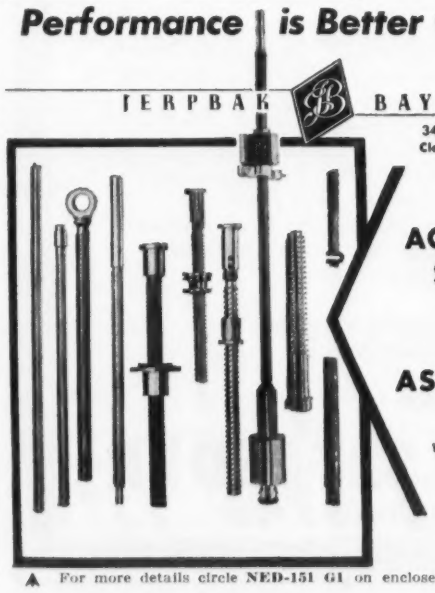
▲ For more details circle NED-150 G1 on enclosed inquiry slip ▲



ON LAND
ON SEA
IN SPACE

Performance is Better with

JERPBAK BAYLESS
34170 Solon Rd.
Cleveland 39, Ohio



ACTUATOR SCREW and NUT ASSEMBLIES

Write For Literature

▲ For more details circle NED-151 G1 on enclosed inquiry slip ▲

CUT SANDING COSTS... with Lightweight, FAST

MITY-MIDGET

Cut sanding costs as much as 75% (over hand sanding), with National's Mity-Midget . . . the original orbital action sander. Weighs only 4 lbs . . . yet has 25 sq. in. of abrasive area. Powerful . . . vibrationless. Write for complete catalog, today.

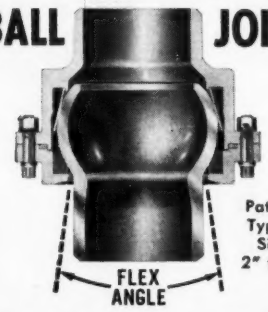
NATIONAL N D DETROIT

Write for complete catalog
NATIONAL-DETROIT, INC.
ROCKFORD, ILLINOIS

▲ For more details circle NED-152 G1 on enclosed inquiry slip ▲

BARCO BALL JOINTS

High Temperature
(from 500° to 1200°F)



Patented Type HT Sizes: 2" to 16"

NEW! A simple way to solve

PIPE EXPANSION PROBLEMS

Send for New Catalog No. 250

BARCO

At risers . . . at offsets . . . in straight runs, install Barco Flexible Ball Joints to handle any amount of PIPE EXPANSION—also twisting, torsional movement. Here's why it PAYS:

Save Time—Expensive engineering and stress analysis not required.

Cut Costs—No "pressure end thrust" in Barco joints; heavy anchoring and pipe guides not needed for installation.

Safety—Joints are *self-aligning* for protection against costly "mis-alignment" damage. No thin wall sections; no lubrication needed.

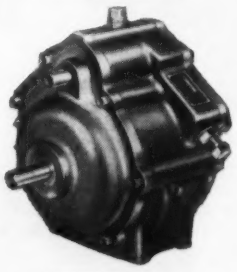
Save Space—One foot of offset (between ball center points) provides for 3" expansion. *Find out about this method; send for literature.* BARCO MANUFACTURING CO., 530H Hough St., Barrington, Illinois.

▲ For more details circle NED-153 G1 on enclosed inquiry slip ▲

HOT-SHIFT TRANSMISSIONS

S-N Reversing Transmissions have precision-designed features that meet your requirements for power transmission. Space-saving single units—Smooth and instant reversing under full load—Gives you maximum flexibility of design—Performance-proven—8 HP and 28 HP models available.

MODEL 5108
FORWARD, REVERSE, NEUTRAL, REDUCTION



PATENTED

SPECIFICATIONS	
Reduction Forward	3.75:1
Ratio Reverse	3.75:1
Power up to	8 HP
Max. Input Torque	320 in. lbs.
Max. Input Speed	2400 RPM
Dimensions Long	9 1/16"
Dimensions Wide	10"
Dimensions High	10 1/16"

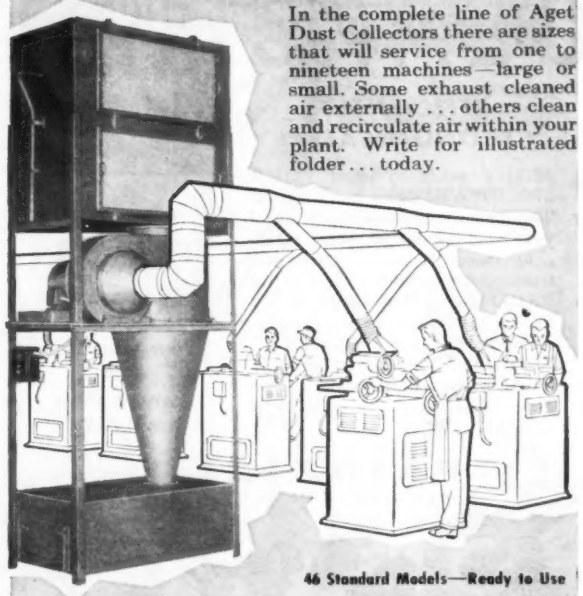
Write for technical literature:
SNOW-NABSTEDT
The Snow-Nabstedt Gear Corporation
Hamden, Connecticut
TRANSMISSION SPECIALISTS FOR OVER HALF A CENTURY

▲ For more details circle NED-154 G1 on enclosed inquiry slip ▲

just ONE DUSTKOP STOPS DUST

heavy duty unit services up to 19 MACHINES

In the complete line of Aget Dust Collectors there are sizes that will service from one to nineteen machines—large or small. Some exhaust cleaned air externally . . . others clean and recirculate air within your plant. Write for illustrated folder . . . today.



46 Standard Models—Ready to Use

AGET manufacturing company
1396 Church Street • Adrian, Michigan

▲ For more details circle NED-155 G1 on enclosed inquiry slip ▲

PIPE LINE to a Better Product through

FERRO FILTER®

MAGNETIC SEPARATORS

They provide the positive method of extracting microscopic ferrous particles from liquids and slurries. A strong electromagnet magnetizes the stack of grids which attract and remove, from suspension, even feebly magnetic particles.

PIPELINE FERROFILTER above

Gravity and Underfeed models also available.

Write for BULLETIN

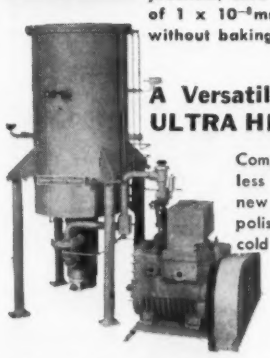
S. G. FRANTZ CO., Inc.
567 Kline Ave. at Brunswick Pike
P. O. Box 1138 Trenton 6, N. J.

▲ For more details circle NED-156 G1 on enclosed inquiry slip ▲

Ultra High VACUUM PUMPING SYSTEM

TYPE 1450 employs only the newest proven technology and components. In design, selected materials, and precise workmanship it offers a practical, *ultra high* vacuum system for pressures of 1 x 10^{-8}mm Hg., or lower, in a few hours, without baking or metallic gasketing.

TYPE 1450
A Versatile, Practical, Inexpensive ULTRA HIGH VACUUM FACILITY



Shop View of Type 1450 showing diffusion and mechanical pumps.

Completely factory assembled, this valveless system has double-pumped O-rings; new high speed 6″ diffusion pump; large, polished, stainless steel liquid nitrogen cold trap in bottom half of chamber, plus an effective anti-migration barrier.

Optional Items: baking equipment for 250°C. to lower ultimate pressure; feed-throughs for instrumentation, power, and cover-supported pay-load; internal heating and cooling devices; automatic liquid nitrogen level control device.

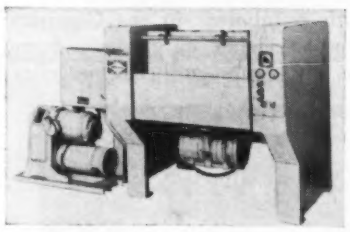
OTHER ADVANTAGES:
Unobstructed Work Area — 22″ x 24″ with vacuum instrumentation.
Suitable for Prolonged Tests — Best Available Proven Components
High Pumping Speed

Write for Descriptive Brochure or complete quotation.

GENERAL VACUUM CORPORATION
81 HICKS AVENUE, MEDFORD 55, MASSACHUSETTS EXport 5-8100

▲ For more details circle NED-157 G1 on enclosed inquiry slip ▲

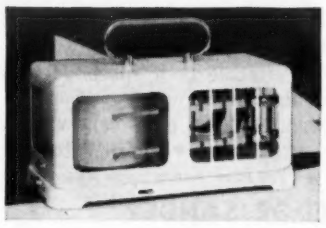
VIBRATORY METAL FINISHER
capacities from 0.1 to 20 cu ft



Castings, forgings, and other metal products can be cleaned, descaled, deburred, radiused, finished, colored, and abraded in Jackson Vibrado vibratory metal finishers. Made in sizes ranging from 0.1 to 20 cu ft, these machines feature full radius roll-over tub design for maximum effective contact area, compact design, 180-degree tilt for easy unloading, low height, and controlled orbital flow pattern with synchronized vibration for optimum finish. Machine operates quietly without special foundations. • **Abrado Finish Corp.**, 1750 Elizabeth Ave. N.W., Grand Rapids, Mich.

▲ For more details circle NED-158 G1 on enclosed inquiry slip ▲

SMALL THERMOHYGROGRAPH
records temperature and humidity



Although developed for meteorological use, this compact thermohygrograph for measuring and recording temperature and humidity finds wide industrial use for monitoring conditions in special rooms, plants, warehouses, and enclosures. It can be furnished with 24-hr, 7-day, or 14-day clockworks in various temperature ranges. Unit measures 8½ x 4 x 4 in., has a 3 x 3-in. drum and weighs 3½ lb. • **Kahl Scientific Instrument Corp.**, Box 1166, El Cajon, Calif.

▲ For more details circle NED-159 G1 on enclosed inquiry slip ▲

WHITEPRINTING MACHINES
two units operate at 35 and 45 fpm

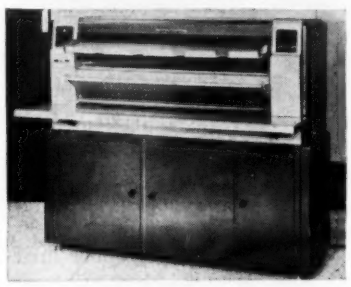


Table top automatic dry diazo whiteprinting machine is offered in two models, both of which have 42-in. printing width and operate on 220 v ac. One model is equipped with a 3000-w mercury arc exposure lamp and operates at 35 fpm, whereas other model has a 4000-w lamp and operates at 45 fpm. Both machines have automatic separation of the master and copy paper and a reversing switch for rejection of misaligned originals. Feed table measures 65 x 16 in. A stand with storage space for paper and 2-gal ammonia supply is available at extra cost. • **Charles Bruning Co.**, Paragon-Revolute Div., 1800 W. Central Rd., Mt. Prospect, Ill.

▲ For more details circle NED-160 G1 on enclosed inquiry slip ▲

CLEVELAND AIR-POWERED FEEDER

CONTROLLED MOVEMENT OF MATERIALS

Accurate, controlled flow of granular materials and small parts is assured with efficient Cleveland air powered vibrating feeders. The vibratory drive has only one moving part, a piston, for low air consumption. No motors, eccentrics, belts, bearings or gears to cause maintenance trouble. No springs to be adjusted. Ideal for hazardous, dusty, or high temperature conditions, Cleveland all-metal vibrating conveyors are designed for fast easy cleaning.

Either open or tubular feeders are available in all lengths and capacities. No special foundation is required to floor mount the feeder. It can also be suspended overhead for low cost installation with existing equipment.

Count on Cleveland for proven quality air and electric vibrators, vibrating feeders and tables.

For complete details, write for Bulletin 1000
3327-CV

Bin Stuck Lately?

THE CLEVELAND VIBRATOR CO.
2744-7 Clinton Ave. • Cleveland 13, Ohio

▲ For more details circle NED-161 G1 on enclosed inquiry slip ▲

INDUSTRIAL INKS To Mark Anything!

Whatever the substance, Phillips has an ink to mark it permanently and legibly—or can make one. Marking experts insist on "Clear Print" Wood Block Stamp Pads and Opaque Inks. They get clear, sharp, fast-drying impressions. Also inks for brush, pen, stencil or machine application available in a variety of colors and quantity containers.

★ Quick Laboratory Service On Your Problem Markings
★ To Permanently Mark . . . Metals, Plastics, Glass, Wood, Paper, Leather, Ceramics—glazed, varnished or lacquered surfaces and virtually every other known material.

For Complete Information Phone BAker 5-8201 or write:

PHILLIPS PROCESS CO. INC.
192 MILL STREET
ROCHESTER, NEW YORK

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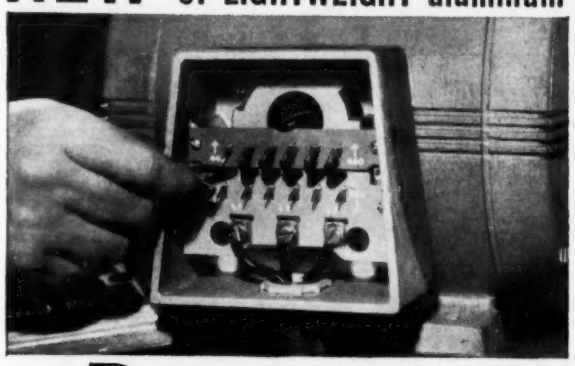
NEW Franklin standard motors of LIGHTWEIGHT aluminum



Pre-wired ON OUR ASSEMBLY LINE, NOT YOURS!

Comes pre-connected to your specifications. (All stab connectors up-440 V. All connectors down-220 V!) Just connect the three line leads and the new Franklin motor is ready to run. See it! And write Department NED-7 for free color brochure.

Franklin Electric Co., Inc.
BLUFFTON, INDIANA

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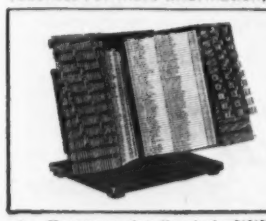
IT'S A SNAP
to keep life in FLEXOLINE lists without recopying

Snap out dead listings. Snap in new names in exactly the sequence you want. Type only fresh additions . . . in seconds . . . on scored sheets that separate into springy strips. Flexoline frames in hinged stands or rotaries hold thousands of strips for instantly visible reference. Perfect for listings of parts, phone information, cross files, account numbers, routing guides and hundreds of other active records. For more information, send the coupon now.



ACME VISIBLE
ACME VISIBLE RECORDS, INC.
3407 West Allview Drive, Crozet, Va.
Please give me full facts on time and money saving Flexoline reference systems.
NAME
ADDRESS
CITY ZONE STATE

▲ For more details circle NED-164 G1 on enclosed inquiry slip ▲

New
ARMSTRONG CATALOG
Quality Tools for Industry

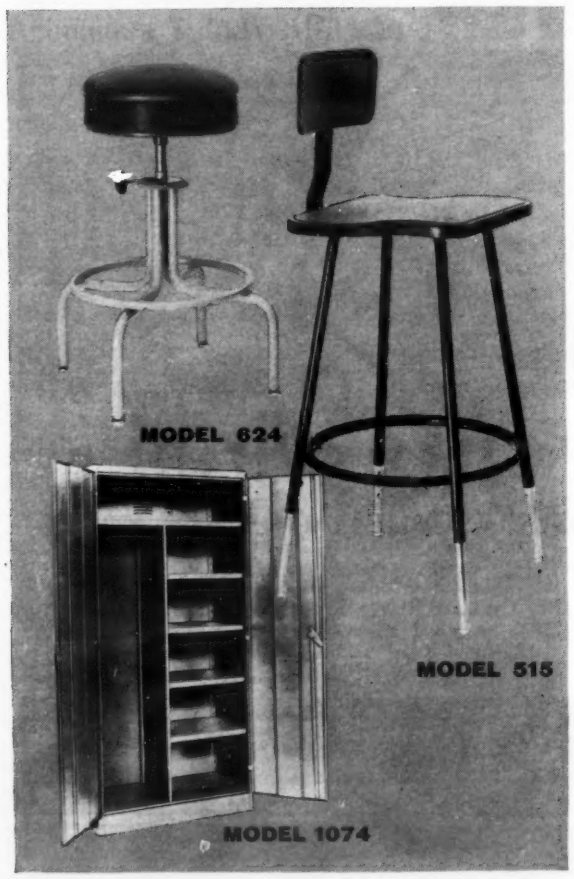
New ARMSTRONG General Catalog No. 700, showing the complete ARMSTRONG Line including approximately 330 new ARMSTRONG tools added in these categories:

- Tool Holders
- Set-Up-and-Hold-Down Tools
- Tool Bits
- Wrenches
- Ratchet Wrenches and Sockets
- Miscellaneous Hand Tools
- Pipe Tools

Anyone who uses or buys hand tools or shop tools needs this free ARMSTRONG Catalog No. 700 showing these important additions as well as thousands of other ARMSTRONG tools.
Write direct, or phone your local ARMSTRONG Distributor (Distributor name furnished upon request).

ARMSTRONG BROS. TOOL Co. 5245 W. Armstrong Ave. Chicago 46, Illinois

▲ For more details circle NED-165 G1 on enclosed inquiry slip ▲



LITTLE THINGS MAKE ROYAL EQUIPMENT GREAT
—and keep output high all day long

A Royal chair may look like others—but not to the worker who sits on one all day. A case in point—Model 515 above—America's foremost production stool. Its uncluttered lines hide a dozen features that help posture, comfort, and efficiency . . . the big, contoured, 4-way adjustable back is mounted on spring steel to respond to the slightest body movement . . . the legs telescope for height adjustment. There are no protrusions to cause injuries . . . ■ There are dozens of Royal chairs and stools for industry. Each the best for its specific purpose. ■ The same holds true for Royal cabinets. All corners are rounded, all hinges and fastenings concealed. The extra heavy gauge panels are flush finished. Doors are rigid, shelves are adjustable and every cabinet is ventilated. Write today for full details. ■ ROYAL METAL MANUFACTURING COMPANY, Dept. 25-G, One Park Ave., New York 16, N. Y. In Canada—Galt, Ont.

Royal INDUSTRIAL EQUIPMENT

▲ For more details circle NED-166 G1 on enclosed inquiry slip ▲

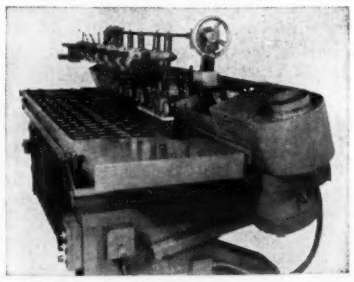
DOME-SHAPED SHELTER
free standing and easily assembled

High structural strength is inherent in the Geospace free-standing, weatherproof shelter of geodesic dome design which has use as tool or storage shed, emergency

shelter, job-site warehouse, construction shack, or field office. Shelter is assembled from prefabricated triangular panels of ½-in. thick Fomecor board, resin coated for weather resistance. Panels are bent and bolted together at the site to form the 22-ft diameter dome. Fomecor is a foamed plastic and kraft paper laminate. Dome is 12½ ft high, weighs 450 lb and has 352 sq ft of usable floor space. It is equipped with a hinged double door, window openings and ceiling vents, and is offered in pale yellow, forest green, and eggshell white colors. ● **Filtered Rosin Products Co.**, Baxley, Ga.

▲ For more details circle NED-167 G1 on enclosed inquiry slip ▲

EDGE SANDER
work is power-conveyed to head at feed rates from 30 to 100 fpm



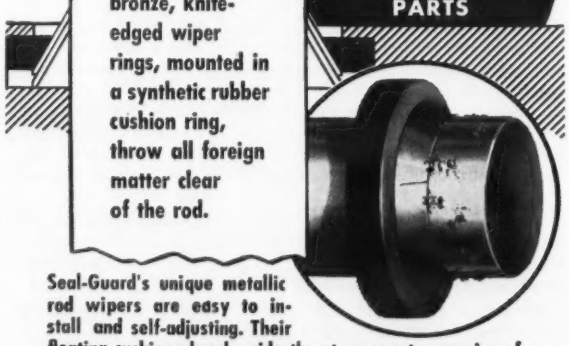
Flat stock having shaped, angular, or square edges can be sanded by platen, shear, or form block methods on the high production Critz Model 200 Auto Edgeshape sander. With work power-conveyed to its one or two heads, pieces as short as 6 in. and up to 6 in. thick can be handled. Feed rates may be varied from 30 to 100 fpm on a 6-in. by 16½-ft endless belt. Work is held securely by a staggered array of seven hold-down rolls with replaceable white rubber tires.

The 24¼-in. by 7-ft table consists of 84 rubber tired ball bearing wheels, with 6 in. of its width a conveyor belt. An optional side telescopic conveyor increases table width up to 48 in. and a 5 x 2-ft infeed table extension increases over-all machine length to 13 ft 7 in. The 6-in. wide, 214 to 226-in. abrasive belt is driven by a 5-hp motor at 2125 or 4250 cfpm. The entire table or either end may be raised or lowered, and the belt and pulley assembly can be tilted up to 30 degrees. ● **Martinsville Machine Works, Inc.**, Martinsville, Va.

▲ For more details circle NED-168 G1 on enclosed inquiry slip ▲

YOUR BEST BET!

Seal-Guard®
THE ULTIMATE PROTECTION FOR VITAL HYDRAULIC PARTS



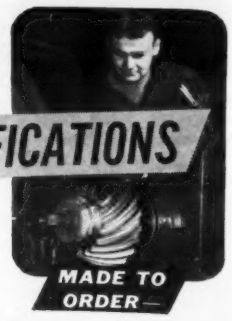
Seal-Guard's unique metallic rod wipers are easy to install and self-adjusting. Their floating cushion absorbs side thrust, prevents scarring of the rod. Practically friction-less, they resist oil and heat for long, trouble-free service.

Standard sizes for ¼" to 6" diameter rods. May be special-ordered up to 24¼" in diameter.

HYDRAULIC ACCESSORIES CO.
24301 Hoover Road, Warren Mich.

▲ For more details circle NED-169 G1 on enclosed inquiry slip ▲

GEARS to your SPECIFICATIONS

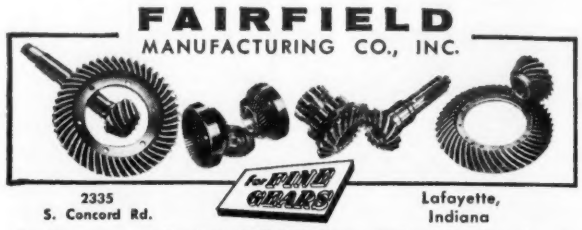


EFFICIENTLY! ECONOMICALLY!

Making gears to meet YOUR SPECIFICATIONS is our business. The special or unusual requirements you have for design...size...finish ...tolerances...materials...and heat treatment are often "standard" at FAIRFIELD. Here, every facility needed is available to you for production of fine gears EFFICIENTLY, ECONOMICALLY. *LARGE or SMALL, your requirements will receive prompt attention.* CALL or WRITE TODAY.

SPIRAL BEVEL
STRAIGHT BEVEL
HYPOID
HERRINGBONE
HELICAL
DIFFERENTIALS
SPUR
WORMS AND WORM GEARS

FAIRFIELD MANUFACTURING CO., INC.



2335 S. Concord Rd. Lafayette, Indiana

▲ For more details circle NED-170 G1 on enclosed inquiry slip ▲

NEW AIRETOOL 400-T
cuts sheet metal tapping costs

AND its powerful air motor increases production, too. Lightweight (less than 3 pounds with chuck) . . . maneuverable (pistol grip handle) . . . yet, rugged enough (heavy duty heat-treated aluminum alloy housing and steel alloy operating parts) to meet 'round-the-clock production schedules. And, it's efficient . . . operates at 400 rpm on friction ball or roller bearings . . . muffled motor reduces noise level, cuts operator fatigue . . . push button reversing action. To get a free, in-plant demonstration of the 400-T, or any of Airetool's complete line of pneumatic production tools, call your local representative . . . he's in the Yellow Pages . . . or, write direct.

AIRETOOL MANUFACTURING COMPANY SPRINGFIELD, OHIO

Representatives in principal cities of the free world

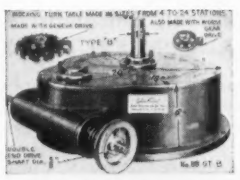
▲ For more details circle NED-171 G1 on enclosed inquiry slip ▲

EISLER
FOR 39 YEARS

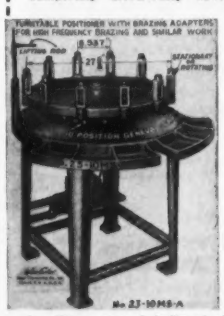
We supply any part or complete equipment . . . Special turntables made to order

INDEXING TURNTABLES
MORE THAN 100 DIFFERENT TYPES

- FOR WELDING • BRAZING • SOLDERING • SPRAYING
- GLASS INSULATOR MELTING AND GLASS GLAZING with rotating stations and indexing with barrel cam or Geneva gear action.
- For work transferring, tilting positions. . Motorized or hand operated.



Eisler Indexing Turntables are completely electrically controlled



AND CAMS MADE TO YOUR SPECS!

"Ask for catalog 88-57"

EISLER ENGINEERING CO., INC.
740 SO. 13th ST., NEWARK 3, N. J
Charles Eisler, Jr., President

▲ For more details circle NED-172 G1 on enclosed inquiry slip ▲

BARREL AND DRUM CRADLES

5 Guaranteed Years

- Pressed Steel
- Light Weight
- Strong enough to support heaviest drums with safety

as low as $15.50

EASY ONE MAN HANDLING

THE AMERICAN PULLEY COMPANY
4200 WISSAHICKON AVENUE • PHILADELPHIA 29, PA.
A division of VAN NORMAN INDUSTRIES INC.

For more details circle NED-173 G1 on enclosed inquiry slip

your guide to the gear pump for your application

Searching for a gear pump with top volumetric efficiency?

• Eastern 1200 series – up to 1.6 gpm – pressures to 800 psi • Eastern 100 series – up to 5 gpm – pressures up to 1500 psi • Eastern 700 series – up to 9.8 gpm – pressures up to 1500 psi. Save hours of searching your way through the gear pump maze – send for catalog 810 now!

Other Eastern products:

- hydraulic motors
- centrifugal pumps
- positive displacement pumps
- aircraft pumps

EASTERN INDUSTRIES, INC.
Hamden, Connecticut

For more details circle NED-174 G1 on enclosed inquiry slip

ERIEZ

60 seconds that will help you improve operating efficiency!

BIG NEW FREE CATALOG

shows you how Permanent Magnets can work for you...

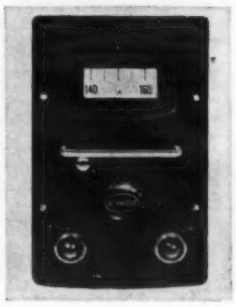
Eriez Hi-Powr® Magnetic Separators put powerful, never-failing magnetic strength to work in your plant to remove dangerous tramp iron and fine iron contamination. There's an Eriez Plate, Pulley, Grate, Drum, Hump, Ferrous Trap, etc. for most every wet or dry separation job. Eriez has the unit to solve your problem. Write for big free catalog to:

ERIEZ
A GROWTH COMPANY... 10 NEW PRODUCTS IN THE LAST 5 YEARS

ERIEZ MANUFACTURING CO.
80UA Magnet Dr., Erie, Pa.

For more details circle NED-175 G1 on enclosed inquiry slip

TEMPERATURE CONTROLLER has −150 to 1050° F range



Choice of on-off or proportioning control is provided by the Pt temperature controller, a transistorized unit of plug-in construction. The resistance bulb signaling type unit has a 22-in. long scale and requires less than a 5 x 8-in. panel space. Three such units will fit in a standard 9 x 19-in. rack panel. Interchangeable scales are printed on stainless steel in 1° graduations and 300° F and C spans. One probe handles all ranges. • **Technique Associates**, 1413 N. Cornell, Indianapolis 2, Ind.

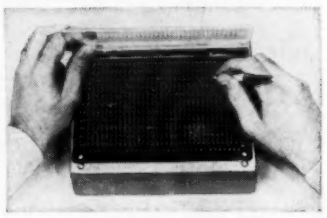
For more details circle NED-176 G1 on enclosed inquiry slip

PERSONAL RADIATION MONITOR gives visual and audible warning

Worn in the breast pocket like a fountain pen, the Monitor radiation warning device gives both a flashing light and an audible signal if wearer encounters unexpected gamma or beta rays. Device operates steadily for a month on its tiny mercury battery. Warning signals given are proportional in nature so that sources of radiation can be located, or the best evacuation route chosen in exposure accidents. Monitor is ¾ in. in diameter, 5⅝ in. long, and weighs 3.4 oz with battery. • **Elgin Laboratories, Inc.**, Waterford, Pa.

For more details circle NED-177 G1 on enclosed inquiry slip

FUNCTION GENERATOR generates any nonlinear output



Programming and controlling any process or operation which is a function of shaft position or time is application for this direct current adjustable function generator. An adjustable nonlinear potentiometer, it provides a rapid means of generating any desired nonlinear output with shaft rotation of an associated interpolating Vernistat. Unit can replace a mechanical cam or provide a nonlinear input to a differential analyzer, computer, or simulator. A series of sliders, fingertip-adjusted to any desired nonlinear output, forms a visual graph of the function. Unit takes an input of 0 to 50 v dc and each of its 34 sliders can connect to 101 voltage points (0 to 100 per cent of input). • **Perkin-Elmer Corp.**, Vernistat Div., Danbury Road, Norwalk, Conn.

For more details circle NED-178 G1 on enclosed inquiry slip

MAGNETIC

will help you improve

NEW MAGNA-RAX PROVIDE FASTER, SAFER HANDLING OF HUNDREDS OF SIZES AND SHAPES OF FERROUS PARTS

Eriez Magna-Rax — used with overhead or monorail conveying systems — provide a sure grip for large or small ferrous stampings, sheets, parts, etc., in conveying, dipping, washing, coating, baking and spray painting. Standard Magna-Rax handle hundreds of different types of parts — to give you a new high in cost-saving efficiency.

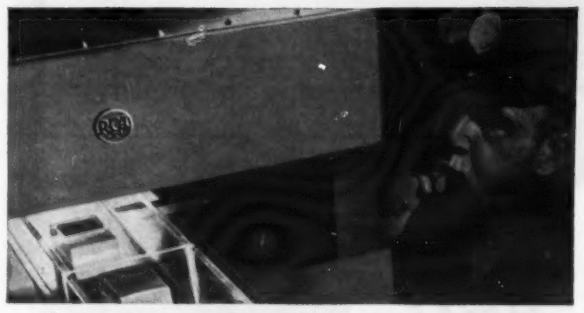
Your choice of Magna-Rax with any number of magnets, spaced for your application. Write for descriptive bulletin to:

ERIEZ
A GROWTH COMPANY... 10 NEW PRODUCTS IN THE LAST 5 YEARS

ERIEZ MANUFACTURING CO. 80UB Magnet Dr., Erie, Pa.

For more details circle NED-179 G1 on enclosed inquiry slip

RCA ELECTRONIC METAL DETECTOR



Automatically protects against tramp metal

in foods, plastics, textiles, chemicals, and rock products

When stray metal is detected, the conveyor automatically stops, or the danger zone is marked, even though the "trouble-makers" are hidden from human eyes. Inspects powdered, bulk, sheet or packaged materials.

Protects costly machinery!
Safeguards product quality!

Find out all about the RCA Metal Detector . . . how it can save you thousands of dollars . . . quickly pays for itself. Write for free booklet: RCA, Dept X-329, Building 15-1, Camden, N. J.

RCA The Most Trusted Name in Electronics
RADIO CORPORATION OF AMERICA

For more details circle NED-180 G1 on enclosed inquiry slip

SOLVE "TOUGH" PARTS PROBLEMS WITH Colonial's SILICONE RUBBER

There's practically no end to the usefulness of silicone rubber as a material for making rubber parts. It won't melt or harden at 700 deg. F., won't conduct electricity, is not affected by sun, water or weather, and even dry ice can't freeze it. These and many other desirable properties which can be obtained through Colonial's expert compounding, make silicone rubber the most likely material for solving your "tough" parts problems.

Whether you are designing new products, or improving existing ones, contact Colonial Rubber Company for details on the advantages of fabricating more efficiently and *profitably* with silicone rubber. Our service is complete . . . you can call on us for any one or all three of the following:

EXPERT COMPOUNDING
ACCURATE PRODUCTION
QUICK DELIVERY

1967-1

COLONIAL RUBBER CO.
RAVENNA, OHIO

For more details circle NED-181 G1 on enclosed inquiry slip

MINUTE

operating efficiency!

Feeds Anything!

POWDERS to PARTS... RIVETS to ROCKS

There's an Eriez Vibratory Feeder to move almost any bulk material accurately and economically with 100% range of control, whether you're feeding ounces or many tons per hour. Versatile, AC-operated Eriez Hi-Vi® Feeders need no rectifier, have totally enclosed drive, exclusive fibre glass springs.

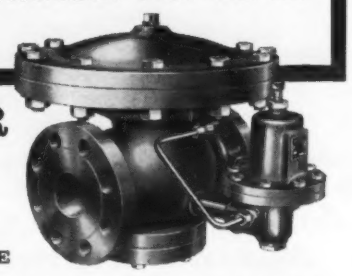
Write for descriptive bulletin to:

ERIEZ
A GROWTH COMPANY... 10 NEW PRODUCTS IN THE LAST 5 YEARS

ERIEZ MANUFACTURING CO.
80UC Magnet Dr., Erie, Pa.

For more details circle NED-182 G1 on enclosed inquiry slip

NO CLOGGED ORIFICES
NO STICKY VALVES
NO DIAPHRAGM RUPTURE



FISHER
Type
92B
STEAM REDUCING VALVE

Here's a pilot operated pressure reducing valve designed to minimize problems inherent in steam service. This completely self-contained unit is especially desirable where air or gas is not available as an operating medium.

Once installed, the 92B is easily maintained. Bleed orifice can be cleaned by removing one fitting. Inner valve, seat ring and main spring can all be reached through the blind flange. Precision construction of the pilot gives the valve exceptionally close accuracy. Ask about the new 92B built of high-strength Nodular Iron, for pressures up to 300 psi.

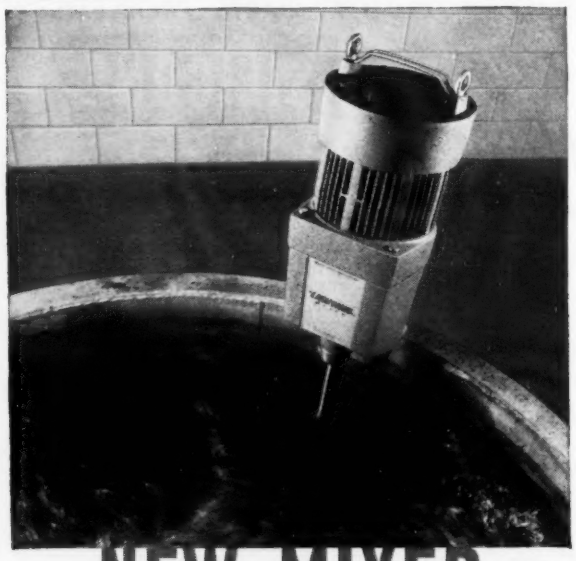
WRITE TODAY FOR BULLETIN D-92B.

IF IT FLOWS THROUGH PIPE ANYWHERE IN THE WORLD ...CHANCES ARE IT'S CONTROLLED BY...

FISHER GOVERNOR COMPANY
Marshalltown, Iowa / Woodstock, Ontario / Rochester, England
Butterfly Valve Division: Continental Equip. Co., Coraopolis, Pa.

FISHER Controls SINCE 1880

▲ For more details circle NED-183 G1 on enclosed inquiry slip ▲



NEW MIXER

Handles many jobs on less power

You won't have to lubricate it for five years.

You can't overload the gear drive.

It comes with a chemical plant motor as *standard,* at no extra cost.

You don't need three hands to remove the shaft.

And it mixes fluids like no portable mixer you've ever seen. Delivers up to 45% more fluid flow in gear-drive models. Higher impeller head in direct-drive models. Actually lets you handle many mixing jobs with a *smaller* mixer drawing *less power.*

This all-new LIGHTNIN Portable Mixer is ready for you now, in sizes from ⅛ to 3 hp. And the price is right. Your LIGHTNIN Mixer representative will gladly show it to you. You'll find his name in Thomas' Register. Or write us for descriptive Bulletin B-520.

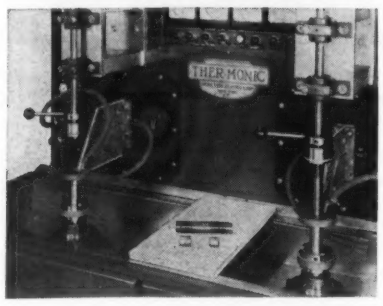
IN FIXED MOUNTINGS, TOO— Get the same all-new advantages in permanent-mounting LIGHTNIN Mixers for open and closed tanks. A complete line, sizes from ¼ to 3 hp. For details on these, send for Bulletin B-521.

Lightnin® Mixers
MIXCO fluid mixing specialists

MIXING EQUIPMENT Co., Inc., 165-a Mt. Read Blvd., Rochester 3, N.Y.
In Canada: Greey Mixing Equipment, Ltd., 100 Miranda Ave., Toronto 19, Ont.
In Europe: Lightnin Mixers, Ltd., Poynton, Cheshire, England

▲ For more details circle NED-184 G1 on enclosed inquiry slip ▲

CENTRIFUGAL INDUCTION CASTING cycle is automatic after loading

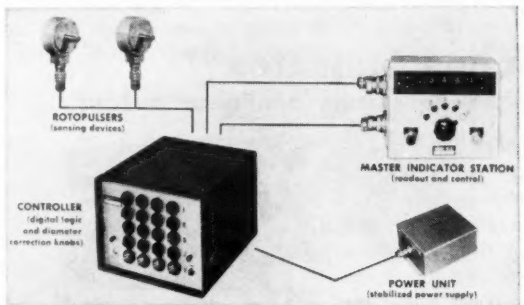


Technique for high speed casting of babbitted metal in steel bushings in a few seconds makes use of a semiautomatic Ther-Monic induction heater and a two-position work and control station. Once the operator places the internally fluxed tube on the spindle adapter and presses the start button, the cycle is automatic. A measured amount of babbitt shot is released from the hopper and passes into the tube, held by an internal plug at the desired area. Then the 17-sec heating cycle at 400° F, rotation at 1000 rpm, and water quench follow in sequence. After the quench, part is transferred to the other position for making another bearing on the other end. While one position heats and quenches, the other is heating, making possible a continuous work flow. Adapters for various sizes of bearings are available. • **Induction Heating Corp.,** 181 Wythe Ave., Brooklyn 11, N. Y.

▲ For more details circle NED-185 G1 on enclosed inquiry slip ▲

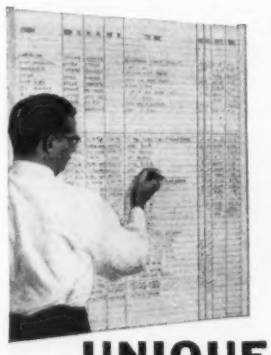
DIGITAL DRAW INDICATORS for precise draw or speed measuring adjust to diameters of two rolls

Both draw and speed are measured accurately within 0.1 per cent at all operating speeds by this line of digital draw indicators for paper machines and other similar applications. Ratio of rotational speed of each of two rolls is electronically computed by a simple digital method. Digital multiplication by a single constant simultaneously adjusts for the actual diameters of the two rolls. The exact draw in per cent is displaced on an illuminated indicator panel.



Units require no calibration and indicate a positive or negative measurement in about ½ sec. Type A and console Type B units have respective maximum capacities of 5 and 50 channels for measuring up to 5 or 50 draws or speeds. • **Louis Allis Co.,** Dept. P, 427 E. Stewart St., Milwaukee 1, Wis.

▲ For more details circle NED-186 G1 on enclosed inquiry slip ▲



Notes grease penciled on the extruded clear plastic Memo Strips*.

Desired columns laid out using adhesive striping tape.

Column title headings made up using adhesive letters.

Memo Strips* slide up and down, snap in and out for easy arrangement.

UNIQUE VISUAL CONTROL

MEMO FLEX,* the new visual control/scheduling board that is easy to use, flexible and low in cost.

Tells you at a glance where things stand, where trouble may be developing. A visual picture of concise details, a constant spur to action. Easily kept active and accurate, it saves time and trouble wherever simple, effective visual control is needed.

Every unit comes complete with all the elements for the user to create his own custom layout. Only $49.50 F.O.B. Plant. Literature on request.

Memo Flex* DIVISION
515 Bannock Street, Dayton 4, Ohio
National Distributor QuesTronics Division, Chicago 6, Ill.
*TRADE MARKS OF THE GARRISON MACHINE WORKS, INC., PAT'D. PEND.

▲ For more details circle NED-187 G1 on enclosed inquiry slip ▲

DESIGNED FOR MODERN PIPING!

THE ECON-O-MISER BALL VALVE

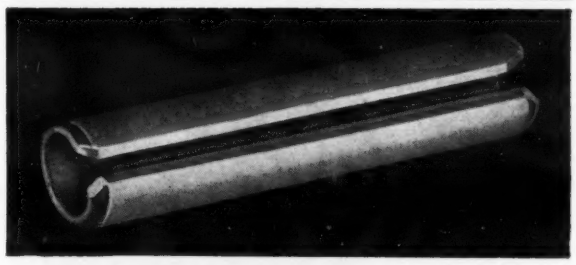
COMPARE THE ECON-O-MISER WITH ANY ON-OFF VALVE!

- Remove 4 bolts — the center section lifts out — unions are eliminated!
- ¼" through 6" size range
- Quarter-turn operation
- Smooth round Two Way Flow
- No metal to metal contact — wiping action assures longer life

WRITE FOR COMPLETE TECHNICAL INFORMATION!

WORCESTER
VALVE CO., INC. / WORCESTER 10, MASS.

▲ For more details circle NED-188 G1 on enclosed inquiry slip ▲



Versatile Rollpin®

simplifies design, speeds production

ROLLPIN can be used in place of taper pins, solid straight pins, set screws, hinge pins, dowels, clevis pins . . . and in some cases as a rivet.

ROLLPIN is a slotted, cylindrical spring pin deliberately oversized in relation to standard production drilled holes . . . compressive forces lock it in place. Reaming or secondary safety operations such as peening are eliminated.

ROLLPIN is easy to install, easy to drive out with a drift pin or punch, yet will "stay put" indefinitely.

ROLLPIN is available for immediate off-the-shelf delivery—comes in sizes from .062" diameter to .500" in carbon steel, corrosion resistant steel or beryllium copper.

For a free bulletin detailing Rollpin applications and installation methods, write to Dept. R54-737.

ROLLPIN®

ELASTIC STOP NUT CORPORATION OF AMERICA
2330 Vauxhall Road, Union, New Jersey

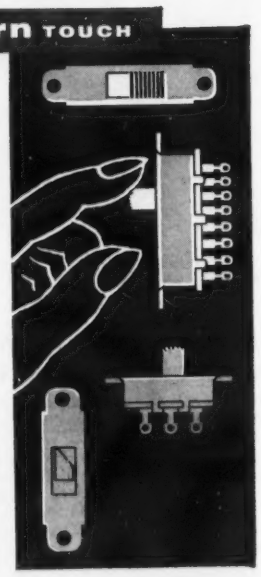
▲ For more details circle NED-189 G1 on enclosed inquiry slip ▲

STACKPOLE *S-L-I-D-E* **SWITCHES**

FOR THE Modern TOUCH

Inexpensive . . . easy to use . . . these tiny, dependable switches bring new operating convenience and sales appeal to modern electrical products. They're available in over 15 basic types—the most complete line — with ratings and features to match your requirements.

- ½- to 6-amp. U.L. Ratings
- 9 Attractive Knob Colors
- 1 to 4 Positions
- 1 to 3 Poles
- Maintained or Momentary Contact
- Pushbutton-operated Types
- Lug or Printed Wiring Terminals



low cost SNAP SWITCHES

Sturdy, low-cost snap action switches for pushbutton assemblies, record players, etc. 1-6 amp U.L.I. ratings.

For Details, write, *Electronic Components Division*
STACKPOLE CARBON CO., St. Marys, Pa.

▲ For more details circle NED-190 G1 on enclosed inquiry slip ▲

ALCOA ALUMINUM PATTERNED SHEET

Adds sales appeal to any product:

Where can *you* use it: Residential or commercial building? Large or small appliances? Trucks, buses or boats? Choose from 22 single-surface, 21 two-surface patterns in natural aluminum finish; or from 20 baked-on Alcoa* Tone-Cote colors.

Get fast delivery from your Alcoa distributor in many alloys, tempers, widths and lengths. For application help, call your Alcoa sales office.

*Trademarks of Aluminum Company of America

ALCOA ALUMINUM
ALUMINUM COMPANY OF AMERICA

For more details circle NED-191 G1 on enclosed inquiry slip

ALCOA ALUMINUM VYNALATE

Prefinished to save time, labor:

Vinyl laminated to aluminum sheet, Alcoa Vynalate* can be sheared, drawn, rolled and punched without harm. Perfect for inside walls and partitions, appliances, boats, aircraft, furniture, luggage and what-have-you. In 39 design-color combinations; widths to 48 in.; thicknesses from 0.015 in. to 0.051 in.

Your Alcoa sales office can give you more information, help with selection or application of Vynalate. Call today!

*Trademark of Aluminum Company of America

ALCOA ALUMINUM
ALUMINUM COMPANY OF AMERICA

For more details circle NED-192 G1 on enclosed inquiry slip

ALCOA ALUMINUM 3-D SHEET

Function with style built in:

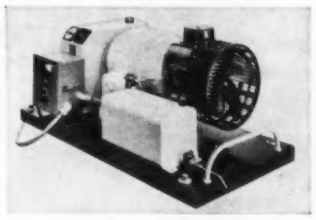
Contemporary design makes Alcoa 3-D Sheet ideal for sunscreens, partitions, façades, enclosures, inexpensive architectural remodeling—any decorative or functional use. In four designs: *Regent, Egyptian, Baguette, Offset;* mill finish or 11 wear- and fade-resistant Alcoa Alumalure® colors.

For data, call your Alcoa sales office.

ALCOA ALUMINUM
ALUMINUM COMPANY OF AMERICA

For more details circle NED-193 G1 on enclosed inquiry slip

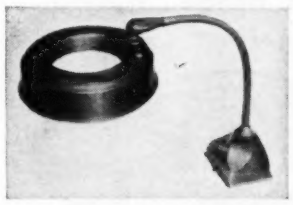
AIR COMPRESSOR provides 4 cfm at up to 3000 psi



Self - contained, high pressure air compressor package delivers 4 cfm of dry, free air at up to 3000 psi. It can be regulated to cut on and off at any desired pressures and performs unattended for 500 operating hours. In addition to the compressor, package consists of an electric motor, starter box, moisture separator, pressure switch, relief valves, repeat cycle timer, elapsed time indicator, pressure gage, 500-hr oil sump, and pneumatic component box. The 36 x 18 x 16½-in. package shown weighs 90 lb and can also be driven by gasoline engine or hydraulic motor. ● **Walter Kidde & Co.**, Kidde Aero-Space Div., 675 Main St., Belleville 9, N. J.

For more details circle NED-194 G1 on enclosed inquiry slip

ILLUMINATED MAGNIFIER has 5-in. diameter lens



Goose-neck arm of the Magniflex Junior fluorescent illuminated magnifier adapts it for assembly and production line use where space is limited. It utilizes an optically ground, 5-in. diameter, double convex lens with focal length of 13 in. Magnifier reduces eyestrain of workers manipulating electronic components, miniature parts, connections, and wires, or reading schematics and diagrams. ● **Acme Lite Products Co.**, Route 9W, Congers, N. Y.

For more details circle NED-195 G1 on enclosed inquiry slip

PARTS HANDLING BOXES made from glass fiber and plastic

Inventory protection and handling, shipping, and storing of small parts are provided by Toteline parts handling boxes, offered with snug-fitting regular or optional transparent lids. They are made from maintenance free, chemically inert polyester resins and glass fiber, and have a high strength-to-weight ratio. Boxes are easily cleaned with hot water, steam, or detergents. They nest when empty and stack when full. A wide range of molded-in colors is available in the four sizes ranging from 6 3/16 x 9 25/32 x 2⅛ in. to 11¾ x 8¾ x 4⅛ in. ● **Molded Fiber Glass Tray Co.**, Linesville, Pa.

For more details circle NED-196 G1 on enclosed inquiry slip

ALCOA ALUMINUM SPANGLE SHEET

Bright, sparkling color that lasts:

For interior decorative applications use the strikingly different aluminum sheet product—Alcoa Spangle Sheet. It has an unusual, glittering finish that sparkles with high lights against a contrasting background.

Alcoa Spangle Sheet is available in a range of anodized colors and is ideal for appliance trim, lighting fixtures, jewelry and novelty items, giftware and interior decorations. Write your Alcoa sales office for details.

ALCOA ALUMINUM
ALUMINUM COMPANY OF AMERICA

For more details circle NED-197 G1 on enclosed inquiry slip

ALCOA ALUMINUM TONE-COTE

Twenty beautiful, baked-on colors:

Formable after finishing without cracking, flaking, chipping or peeling, Alcoa Tone-Cote eliminates shop painting, its hazards and high cost. Lustrous, baked-on enamel in 20 standard colors adds sales appeal to appliances, mobile homes, signs, awnings, kitchen cabinets, etc. Thicknesses from 0.016 in. to 0.063 in.; widths to 60 in.; coils or flat sheets.

For technical details and literature, write your Alcoa sales office.

ALCOA ALUMINUM
ALUMINUM COMPANY OF AMERICA

For more details circle NED-198 G1 on enclosed inquiry slip

For all your needs in Alcoa Aluminum Sheet and Plate, call your local Alcoa sales office

Your nearby Alcoa distributor stocks a wide range of warehouse standard Alcoa Aluminum Sheet and Plate in most-wanted sizes, types and alloys. He offers fast delivery from his warehouse, complete technical information.

For more data on the Alcoa Aluminum specialty sheet and plate items on this page, call your Alcoa sales office; or check and mail the coupon at right . . . today!

ALUMINUM COMPANY OF AMERICA
859-G Alcoa Building, Pittsburgh 19, Pa.

Please send me the following:

- ☐ ALCOA ALUMINUM PATTERNED SHEET BROCHURE
- ☐ ALCOA VYNALATE BROCHURE
- ☐ ALCOA ALUMINUM 3-D SHEET FOLDER
- ☐ ALCOA ALUMINUM TONE-COTE BROCHURE, WITH COLOR CHIPS

Name _____

Title _____

Company _____

Address _____

City _____ Zone _____ State _____

ALCOA ALUMINUM
ALUMINUM COMPANY OF AMERICA

Don't throw maintenance money away!

NoDrip TAPE PERMANENTLY PROTECTS AGAINST CONDENSATION AND RUST AT LOWEST COST.

Any maintenance man can check this. Handy 16' rolls of ¼" thick NODRIP TAPE fits any size pipe or fitting. Never absorbs moisture. *Permanently* insulates against damaging pipe sweating—even around unions, tees, angles and valves.

NoDrip PLASTIC COATING

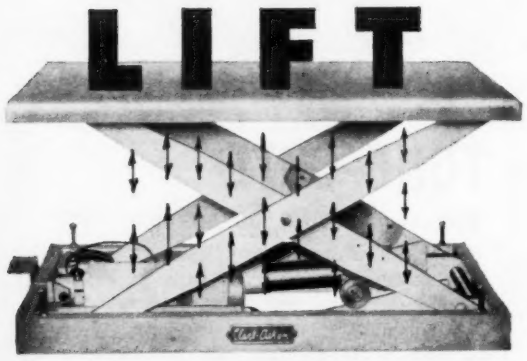
Another fine Mortell product. Use on metals, concrete, brick, tile, plaster surfaces. Apply by brush, trowel or spray to large pipes, tanks, walls, ceilings, air ducts, to eliminate sweating. 1 or 5 gal. cans or 55 gal. drums.

At all leading hardware, mill supply and plumbing jobbers. For full information and technical handbook, write

Mortell COMPANY
526 Burch Street, Kankakee, Ill.

For more details circle NED-201 G1 on enclosed inquiry slip

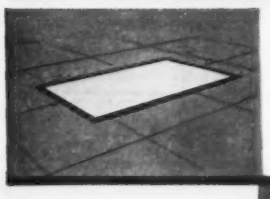
EASY WAY TO GET A LIFT



FOR LOADS UP TO 6000 LBS.—IN MATERIALS HANDLING SYSTEMS OR FOR CONVENIENT PORTABLE USE

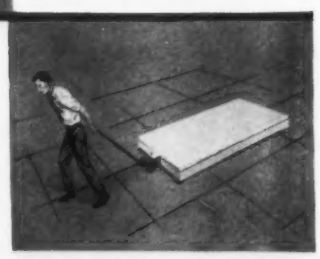
Standard sizes afford a wide selection of heights that readily adapt them to changing requirements—from floor level to a height of 48" and will lift up to 6000 lbs. depending on the unit. Control is fast and sure for any height positioning and with electronic accessories automatic positioning is available. Special cradle tops are available for handling paper rolls and other cylindrical materials.

Clark-Aiken STANDARD LIFT TABLES



FLOOR LEVEL INSTALLATIONS WITH SAFETY TOE GUARD

Tables may be flush floor mounted with disappearing toe guards for safe operation.



EASY TO MOVE FOR PORTABLE USE

Portable unit is wheel mounted; makes easy mobility around the shop for your requirements.

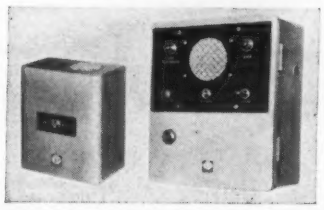
Send today for informative bulletin. Tell us your requirements and we will recommend table size.

THE *Clark-Aiken* COMPANY
105 HART ST. LEE, MASSACHUSETTS

Canadian Representative: Gordon W. Keates
133 Flora Drive, Scarborough, Ontario

For more details circle NED-202 G1 on enclosed inquiry slip

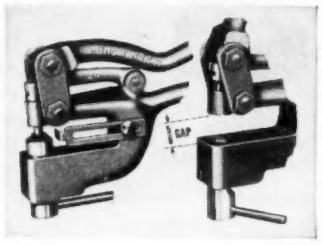
AUDIO ALARM SYSTEM
functions during nonoccupancy



Self-supervising Powers-Mosler audio alarm system provides tamperproof security for various types of buildings during periods of nonoccupancy. Signal units with microphones which are ultra-sensitive to sound and vibration detect unauthorized entry through doors, windows, walls, or ceilings. Presence of an intruder who remained in hiding until the building was closed is also detected. A silent alarm is relayed to a monitor unit which can be as far away as 5 miles. As many as ten microphones can be connected to one signal unit. Sound sensitivity is adjustable. A day-night switch and an emergency power supply are built in. • **Powers Regulator Co.**, Dept. ND-5, 3400 Oakton St., Skokie, Ill.

For more details circle NED-203 G1 on enclosed inquiry slip

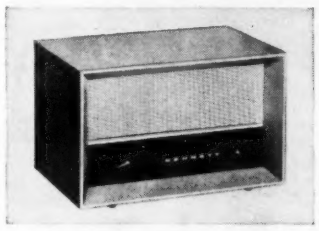
SHEET METAL PUNCH
will clear a ½-in. flange



Die of this 4R sheet metal punch can be lowered or raised to clear a piece of work with a ½-in. flange. Punch has a 2-in. throat depth with back gage and has punching capacity of 5/16 in. through 18-gage or 3/16 in. through 14-gage steel. Punches and dies are offered in sizes 1/16 through 5/16 in. by 1/64-in. increments. • **W. A. Whitney Mfg. Co.**, 636 Race St., Rockford, Ill.

For more details circle NED-204 G1 on enclosed inquiry slip

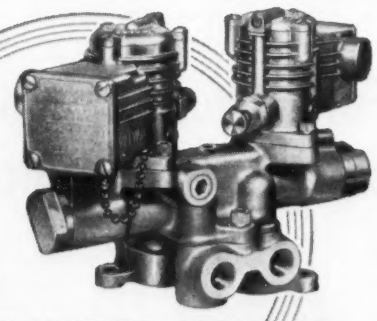
INTERCOM SYSTEM
portable unit is wireless



After plugging into an electric outlet, the Bennett wireless intercommunication system is used by pressing a lever to talk, then releasing it to listen. Up to eight additional units may be used, with all stations having the same clarity at the same volume. Units may be moved from place to place in plant or office as requirements dictate. For extended talking, the lever may be locked in position. A sensitive Alnico V speaker-microphone is incorporated. • **Precision Equipment Co.**, 4409 Ravenswood Ave., Chicago 40, Ill.

For more details circle NED-205 G1 on enclosed inquiry slip

SPEED KING®



Pilot-Operated AIR CONTROL VALVES

Write for Bulletin SSK
Address:
Bellows-Valvair
Akron 9, Ohio
Dept. NED-761

Speed King valves, with solenoid coils guaranteed against burn-out for the life of the valve, are built to JIC Standards . . . sealed against dirt or moisture . . . fully air-operated . . . feature interchangeable pilots, choice of mountings, coils for ac or dc, sizes from 1/4 through 1 in. NPT.

8181

Bellows-Valvair
AKRON 9, OHIO
DIVISION OF INTERNATIONAL BASIC ECONOMY CORPORATION (IBEC)

For more details circle NED-206 G1 on enclosed inquiry slip

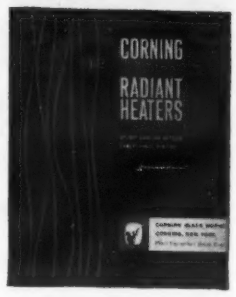
new booklet

SHOWS HOW TO SOLVE HEATING AND DRYING PROBLEMS

1 Details the theory and practice of heating and drying with radiant energy.

2 Shows how the use of glass as an energy source is up to 90% efficient for heating, drying, curing or baking.

3 Gives specifications on both VYCOR® Tubular Heaters and PYREX® Panel Heaters.



Booklet sent upon request from:
Industrial Components Sales Department
5607 Crystal Street, Corning, N. Y.

CORNING GLASS WORKS
CORNING MEANS RESEARCH IN GLASS

For more details circle NED-207 G1 on enclosed inquiry slip

Reprinted by popular demand

■ **Lists trouble symptoms and remedies on easy-to-use chart.**

■ **Helps you select properly matched components.**

This new G-E guide is a handy reference chart for maintaining your present system . . . and more! It helps you to determine whether, and how, *improvements* can be made in the combination of lamps, starters, ballasts, etc., that you have now . . . to deliver *more* of the type of light *you* require, at *lower cost*. It brings up points you may not have realized before, that can make your job easier.

Ask your General Electric distributor for the new G-E Maintenance Guide for Fluorescent Lighting, or write General Electric Company, Wiring Device Dept., Providence 7, R. I.

GENERAL ELECTRIC

For more details circle NED-208 G1 on enclosed inquiry slip

Safe and solid

Standard and spread-base 1 to 12 step Ladder Stands

Ladder moves freely when not in use. User's weight automatically retracts swivel-type front casters . . . models 9 steps and over feature a foot operated caster brake. Welded, all steel construction. Steps and platform roomy and safe. Entire ladder painted aluminum. Prices identical for standard and spread-base models. ILLUSTRATED CATALOG!

Aluminum Ladder Co.
FLORENCE 4 S. CAROLINA

For more details circle NED-209 G1 on enclosed inquiry slip

FREE!

IMPORTANT FACT-FILLED BOOKLET ON ACCUMITE

the miniature centralized lubrication system everyone can afford!

Cut machine downtime . . . boost production with Accumite . . . the compact low pressure, positive displacement centralized lubrication system. This new specification catalog tells about its size, economy, easy installation. It illustrates the wide choice of Accumite pumps, valves, tubes and complete accessories to fit a vast range of industry applications.

write today for your FREE Accumite Catalog from Alemite — leading manufacturer of quality lubrication systems.

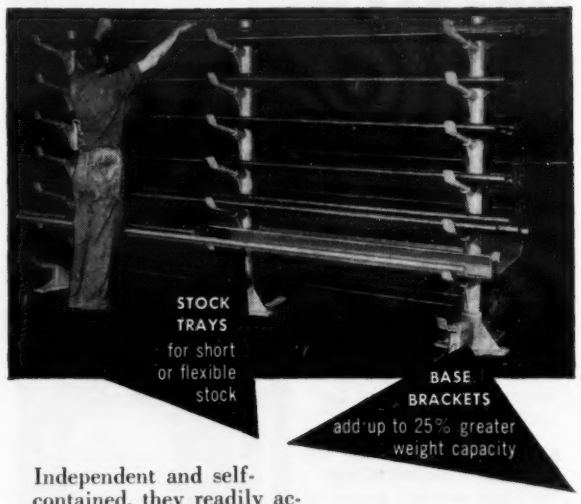
Symbol of SW Excellence

ALEMITE DIVISION STEWART-WARNER CORPORATION

Dept. GG-71, 1850 Diversey Pkwy., Chicago 14, Ill.

For more details circle NED-210 G1 on enclosed inquiry slip

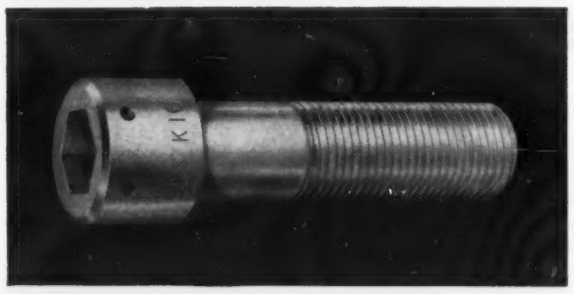
FLEXIBLE STORAGE



Independent and self-contained, they readily accommodate to changes in stock requirements. Easily relocated; no bolting. You get more into less space; you save time in storing and issuing with Brown Section Racks. Iron and steel construction. Can't burn, wrap, sag. Never wear out. Eliminate safety hazards. Act now! Write for complete specs and prices on models and sizes. Brown Engineering Co., 129 N. 3rd Street, Reading, Pa.

BROWN QUICK-SERVE RACKS

For more details circle NED-211 G1 on enclosed inquiry slip



300% more fatigue life than any other standard cap screw

New UNBRAKO K16 socket head cap screws offer four times the fatigue life of ordinary cap screws; twice that of regular UNBRAKOS. Here are some reasons why:

- Threads rolled after heat treat for extra strength
- Fillet area cold worked after heat treat
- Shank ground after heat treat to insure no decarburization and for closer body tolerances
- Magnetic particle inspected per SPS Specs and MIL-I-6868

Standard K16 UNBRAKOS replace costly specials, assure reliability in critical high-fatigue applications. Sizes #8 to ½ in. See your SPS distributor or write Standard Pressed Steel Co.

INDUSTRIAL FASTENER Division SPS

JENKINTOWN 24, PENNSYLVANIA

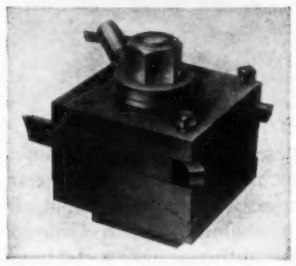
For more details circle NED-212 G1 on enclosed inquiry slip

VALVE POSITIONER
effects full valve travel in 2 sec

On the average diaphragm or piston-operated control valve with a 1-in. stroke and operator with mean effective area of 100 sq in., this positioner will accomplish full valve travel in less than 2 sec. Applicable with all types of pneumatic drive units, positioner can be direct or reverse acting, and can easily be changed from one to the other in the field. Long-travel cams afford linear or square-root characteristics, or can be given throttling characteristics for specific applications. • **Blaw-Knox Co.**, Copes-Vulcan Div., 939 W. 26th St., Erie 4, Pa.

For more details circle NED-213 G1 on enclosed inquiry slip

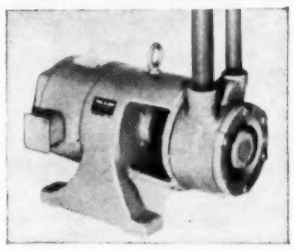
TOOL HOLDER
5-in-1 unit fits all lathes



Versatile tool holder for all lathes does the work of five conventional holders. It accepts standard size cutting tools in three positions, boring bars, and parting blades. Complete in itself, unit speeds tool changing and utilizes lathe rigidity to maximum advantage. Rocker base allows accurate positioning of tool in relation to centerline of work. • **Koning Machine & Tool Co.**, Holland, Mich.

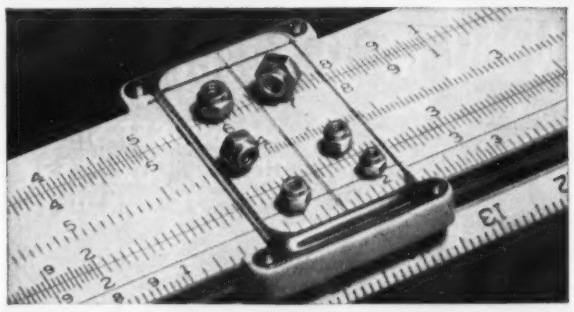
For more details circle NED-214 G1 on enclosed inquiry slip

TURBINE PUMPS
for high head, low capacity service



Pressure regeneration principle by which a multivaned impeller engages and re-engages the liquid to develop high heads in a single stage is used in this line of low-capacity turbine pumps. A close tolerance stripper enables operation with large amounts of entrained gas or vapor. Casing plates are replaceable in the event of extreme wear. Pumps have only one stuffing box or seal and a free-floating impeller that eliminates need for alignment. Parts in contact with liquid can be iron or bronze. Close-coupled monobloc and frame mounted models are available. Self-priming pumps will operate with inlet pressures up to 150 psi and can function on suction lift conditions. • **Worthington Corp.**, Harrison, N. J.

For more details circle NED-215 G1 on enclosed inquiry slip



Microsize FLEXLOCs save weight and space, increase mechanical reliability of your miniature assemblies. Reusable, they are unaffected by moisture, dryness, oil or grease.

Microsize FLEXLOC locknuts protect mechanical integrity of small assemblies

- Hold tight despite impact, shock, vibration
- Require no auxiliary locking elements
- One-piece, all-metal design . . . every thread works, including those in locking section
- Serve as locknuts or stopnuts
- Sizes #0-80 through #4-40 in alloy steel, stainless, aluminum, brass

See your authorized industrial distributor. Or write SPS—manufacturer of precision threaded fasteners and allied products in many metals.

INDUSTRIAL FASTENER Division SPS

JENKINTOWN 24, PENNSYLVANIA

For more details circle NED-216 G1 on enclosed inquiry slip

Louis Allis MAGNETIC DRIVE

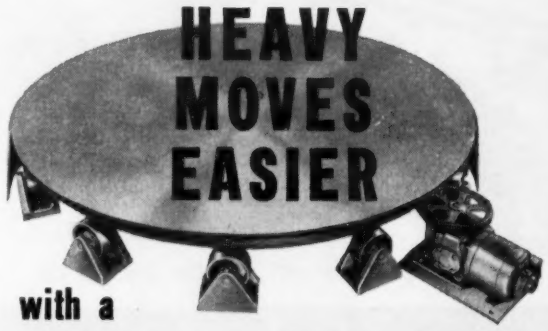
Based on a liquid-cooled magnetic coupling design, this unique drive features stationary-field construction — has no slip rings. Its exclusive annular cooling manifold prevents "flooding" of the drive and bearings—and eliminates condensation in the bearings with planned air-flow cooling. Conduit box, cooling inlet, and discharge can be conveniently located regardless of direction of rotation.

Specify your hp needs and Louis Allis will tailor the drive for the job. Write for Bulletin 3650. The Louis Allis Co., 436 East Stewart Street, Milwaukee 1, Wisconsin. ASD-130

LOUIS ALLIS

For more details circle NED-217 G1 on enclosed inquiry slip

MAKE HEAVY MOVES EASIER



with a

CHASE TURNTABLE

If you need to move or turn heavy materials 45°, 90°, 180°, or as much as 360° during your manufacturing process, consider a Chase turntable for the job. Ideal where hairpin turns must be made, as well as for loading and unloading operations.

Manual or power-driven — roller, caster or ball type available. Diameter and capacity to suit. Any style top — plain, rail, grooved, checkered. Rotating speed of power-driven turntables is flexible.

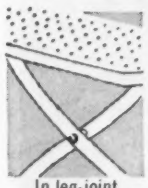
Write for catalog or send specifications for prompt estimate.

Chase FOUNDRY & MANUFACTURING CO.

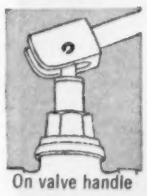
2950 Parsons Ave. • Columbus 7, Ohio

For more details circle NED-218 G1 on enclosed inquiry slip

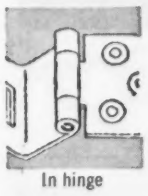
Use it as a hinge pin... SEL-LOK spring pin



In leg-joint of ironing board



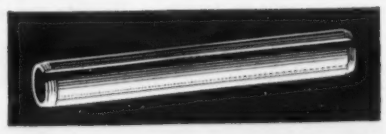
On valve handle



In hinge

- Swift fastening—just drill and drive
- Secure locking—won't work loose despite shock or vibration
- Eliminates costly tapping, reaming, peening, milling
- Can be reused repeatedly
- 101 uses—as keys, cotter pins, axles, hinge pins, wrist pins, stop pins, pivots, etc.

SEL-LOK spring pins are available in carbon and corrosion-resistant steel (from 1/16 x 3/16 through ½ x 4 in.) and beryllium copper (1/16 x 3/16 through ¼ x 3½ in.). See your SPS distributor or write for Bulletin 2670.

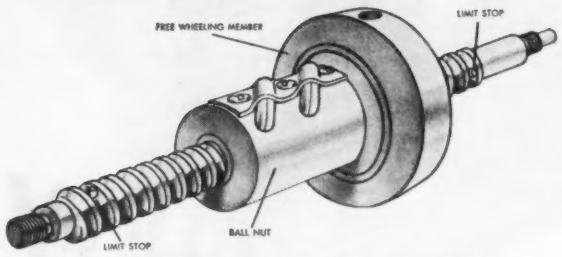


INDUSTRIAL FASTENER Division SPS

JENKINTOWN 24, PENNSYLVANIA

For more details circle NED-219 G1 on enclosed inquiry slip

A New Concept In Actuator Design!



Saginaw Ball Bearing Screw with Torque Limiter provides all the benefits of stepless actuation control with repeatable accuracy . . . synchronization of multiple units . . . *plus, free wheeling* under load at each end of the actuator stroke.

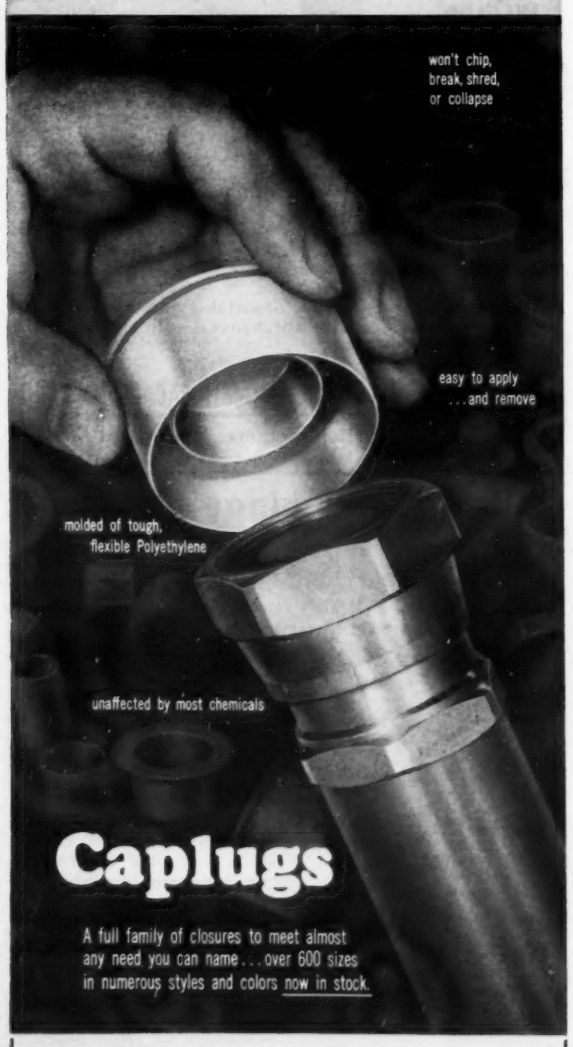
These units have the same capacity as the basic b/b screw used . . . handle compression, tension or combination loads . . . cannot overrun fixed limits . . . cannot overload drive at end of stroke . . . provide exact limit positioning.

WRITE TODAY FOR DATA BOOK

Saginaw ball/bearing Screws

SAGINAW STEERING GEAR DIV.
GENERAL MOTORS CORP., SAGINAW, MICH.

▲ For more details circle **NED-220 G1** on enclosed inquiry slip ▲



Caplugs

A full family of closures to meet almost any need you can name . . . over 600 sizes in numerous styles and colors now in stock.

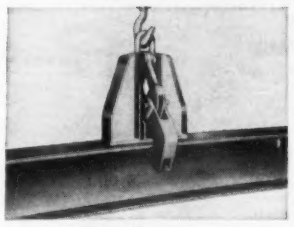
CAPLUGS DIVISION, PROTECTIVE CLOSURES CO., INC.
2209 Elmwood Ave., Buffalo 23, N. Y.

MAIL a free assortment of Caplugs, literature and prices to us, without obligation.

Name_____
Title_____
Firm_____
Address_____
City_____ Zone____ State____

▲ For more details circle **NED-221 G1** on enclosed inquiry slip ▲

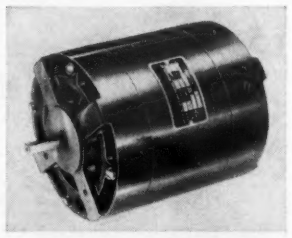
BEAM-HANDLING CLAMP capacity is 1 to 15 tons



Fast, safe handling of wide-flanged beams with 7 to 17-in. flange widths and weighing up to 15 tons is afforded by this Chinbro beam clamp. It centers automatically on the flange as it is lowered. When it is raised, the clamp grabs the beam in a vise-like three-point grip down on the center of the beam and in and up on the underside of the top flange. It has a 3-to-1 safety factor. • **Cianbro Mfg. Corp.**, Box D, Pittsfield, Maine.

▲ For more details circle **NED-222 G1** on enclosed inquiry slip ▲

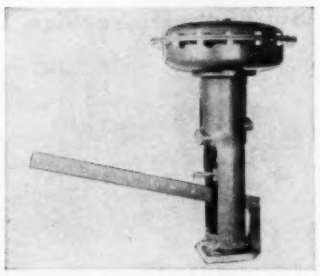
SMALL ELECTRIC MOTORS 1/150 to 1/3-hp range offered



Adequate power with compact design is featured by line of 14 fractional-horsepower frame-size 11 alternating-current motors available in low slip induction, torque, and single, dual, and three-speed hysteresis types. Units operate on 60 or 400 cycles; single, two, or three-phase; 115 or 120/208 v ac. They range from 1/150 hp at 900 rpm to 1/3 hp at 3300 rpm. Motor diameter in all sizes is 4 3/8 in. Housings are aluminum, and motor shaft is supplied to customer requirements. • **Ashland Electric Products, Inc.**, Dept. NED, 32-02 Queens Blvd., Long Island City 1, N. Y.

▲ For more details circle **NED-223 G1** on enclosed inquiry slip ▲

LEVER OPERATOR for dampers, is diaphragm actuated



Type 658U diaphragm-actuated lever operator for controlling dampers, switches, governors, and similar equipment is offered in diaphragm pressure ranges of 3 to 15, 5 to 25, and 6 to 30 psi. Operating arm or stem of the final control element is hooked directly to the lever which has eight 3/8-in. holes. In direct action, lever affords travel from 3 1/8 to 10 3/8 in. In reverse action, in which lever moves up as actuator stem moves down, lever travels of 1 1/2 to 8 3/4 in. are possible. Unit is easily changed from one type of action to the other. It has 46 sq in. effective diaphragm area and maximum stem travel of 1 1/2 in. • **Fisher Governor Co.**, Box 307, Marshalltown, Iowa.

▲ For more details circle **NED-224 G1** on enclosed inquiry slip ▲

▲ For more details circle **NED-225 G1** on enclosed inquiry slip ▲

Cylinder selection and pricing is easy with 3 Hannifin Data Books

Get complete dimensional data and prices on all 3 lines of Hannifin Hydraulic Cylinders. For 2,000 psi systems (3,000 psi non-shock) we offer our famous heavy-duty Series "H". For circuits operated off 1,000 psi pumps, there's the new Series "L", the "thousand-pound" line; also, the "universal" Series "U". New price sheets are easy to use. They tell you when we can ship as well as what your cylinder will cost. Write us today.

HANNIFIN COMPANY
527 South Wolf Road • Des Plaines, Illinois
A DIVISION OF PARKER-HANNIFIN CORPORATION

▲ For more details circle **NED-226 G1** on enclosed inquiry slip ▲

PALMER A GREAT NAME IN THERMOMETERS
Mercury Actuated Temperature Indicating Instruments

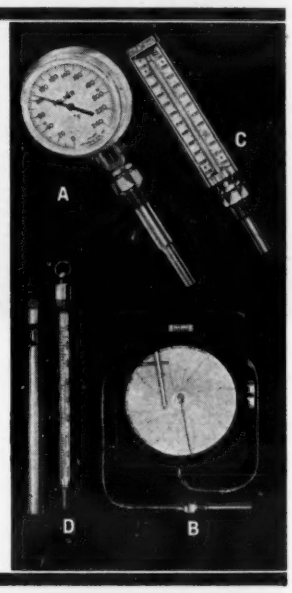
A–4½" DIAL THERMOMETERS: Made in 3 types to suit any requirements. Rigid stem, wall or flush mounted.

B–RECORDING THERMOMETERS: Twelve inch die-cast aluminum case with black finish. Single or multiple pen construction.

C–INDUSTRIAL THERMOMETERS: Red-Reading Mercury, Extruded brass case, chrome finish. Ranges —40° +950° or Equivalent in °C.

D–RED-READING MERCURY LABORATORY THERMOMETERS: Thoroughly annealed for permanent accuracy.

FOR COMPLETE INFORMATION WRITE FOR CATALOG



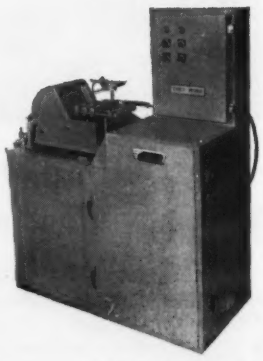
PALMER PALMER THERMOMETERS, INC.
Cincinnati 12, Ohio
MElrose 1-1500

▲ For more details circle **NED-227 G1** on enclosed inquiry slip ▲

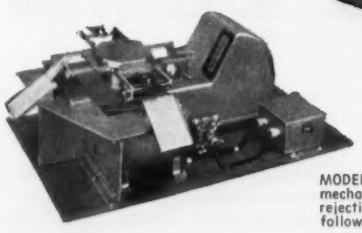
SELECTROL®

AUTOMATIC CHECKWEIGHERS

These Selectrol checkweighing machines have very high sensitivity—capable of proving weight accuracies in the range of one part in 5,000 to one part in 20,000. Machines weigh, classify and sort. Automatic transfer mechanism places commodity on, and removes it from, the scale. Operating speed is up to 60 weighings per minute depending on capacity and accuracy required. Write for Bulletin 3347.



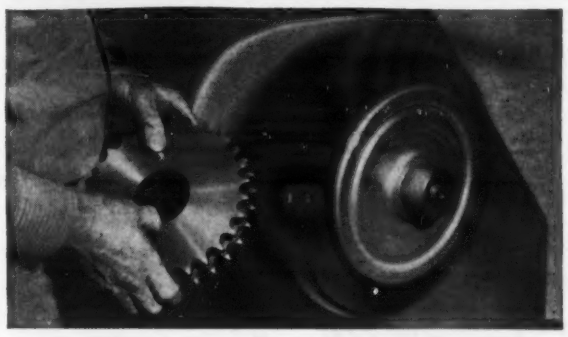
MODEL 145 has in-line "walking deck" type transfer mechanism.



MODEL 144 has rotary transfer mechanism. Automatic selection or rejection is provided immediately following the weigh station.

THE EXACT WEIGHT SCALE CO.
930 W. FIFTH AVE., COLUMBUS 8, OHIO
In Canada: 5 Six Points Road, Toronto 18, Ont.
BETTER QUALITY CONTROL...BETTER COST CONTROL

▲ For more details circle **NED-228 G1** on enclosed inquiry slip ▲

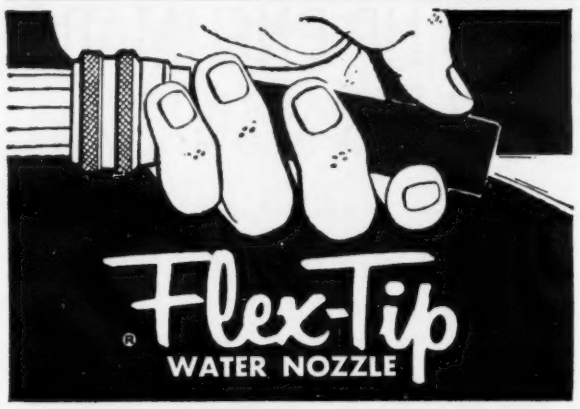


DEBURRING PROBLEMS FADE AWAY

The Vonnegut Brush-Backed Polishing Head is unmatched in its ability to remove burrs from complicated shapes, such as this double width sprocket wheel. The Vonnegut Head will blend tool marks and polish as well as deburr. The variety of sizes and brush diameters in which this tool is available makes it Versatility-Plus. Ask for Bulletin No. 102.

Grinding and Polishing Machinery Corp.
SUCCESSORS TO VONNEGUT MOULDER CORPORATION
2530-J WINTHROP AVENUE, INDIANAPOLIS 5, INDIANA

▲ For more details circle **NED-229 G1** on enclosed inquiry slip ▲



SAVES WATER . . . SAVES TIME

When you want water, flex the nozzle. When you don't, just toss hose aside. Water cuts off automatically. No water wasted, no puddles or mess. No running back and forth between faucet and nozzle. Made of grease-resistant Neoprene and machined brass. No handles, levers, springs or packing. Nothing to break, clog or get out of adjustment.

AVAILABLE FOR ¾" GARDEN HOSE THREAD OR ¼" I. P. T. (COXWELL UNITS.)

For catalog and price sheets, write
HECKETHORN MFG. & SUPPLY CO.
DYERSBURG, TENN.

"Makers of A-10 Air Gun"

▲ For more details circle **NED-230 G1** on enclosed inquiry slip ▲

MAY-FRAN

Steel Belt Conveyors

HINGED STEEL BELTING HANDLES FORGINGS, CHIPS, STAMPINGS AND TURNINGS.

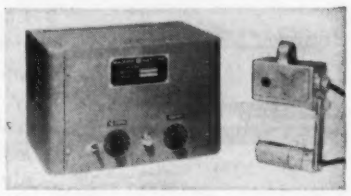
Engineered for maximum economy, maintenance-free operation and long life, May-Fran belting is available in any width or length to meet individual requirements for load and speed. Economical customized conveyors are available from stocked component parts.

WRITE FOR BULLETIN MF-100A

MAY-FRAN MANUFACTURING CO.
1710 CLARKSTONE RD.
CLEVELAND 12, OHIO
PHONE: KE 1-2304

▲ For more details circle **NED-231 G1** on enclosed inquiry slip ▲

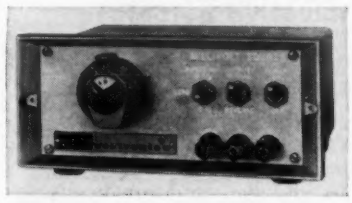
WEB SPLICE DETECTOR
photoelectric unit is automatic



Splices in any transparent or translucent web or those that appear opaque to the eye are detected by this electronic splice detector. The automatic photoelectric unit does not come into physical contact with the web and operates at any web speed. Little maintenance or surveillance is required. Easily installed, it prevents equipment damage, minimizes material waste, and eliminates most machine down time. • **Machine-O-Matic, Inc.**, 717 Chicago Ave., Evanston, Ill.

▲ For more details circle **NED-232 G1** on enclosed inquiry slip ▲

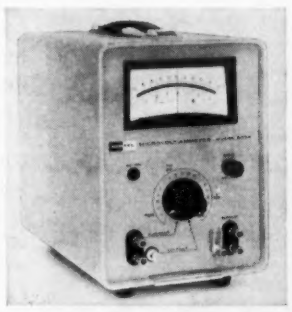
MILLIVOLT SOURCE
electronic unit is adjustable



Offered as a secondary laboratory standard for calibration of instruments with high impedance such as potentiometer recorders, EMV electronic millivolt source is accurate within 0.1 per cent full scale. A zener diode regulated power supply delivers a regulated voltage which is adjustable in two ranges from 0 to 100 mv. Panel mounting and bench types are available. • **Westronics Inc.**, 3605 McCart St., Ft. Worth 10, Tex.

▲ For more details circle **NED-233 G1** on enclosed inquiry slip ▲

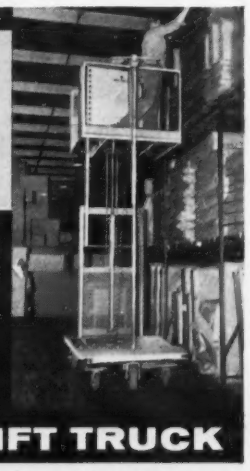
MICROVOLT AMMETER
has high input impedance, stability

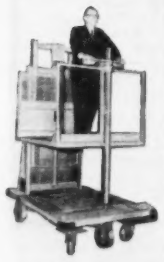


Scale ranges from 100 mu v to 100 v and 1 millimicroamp to 1 amp are built into the Model 203A microvolt ammeter and amplifier. Up to 84 db of over-all negative feedback is applied to the input to assure gain accuracy and stability of input resistance independent of chopper and amplifier characteristics. Accuracy in 15 voltage and 19 current ranges is ±3 per cent of full scale. Polarity is instantly indicated on the mirror faced zero center meter. Output terminals permit use as a low drift direct current amplifier with high input impedance and low output impedance. Price is $750. • **Cohu Electronics, Inc.**, Kin Tel Div., 5725 Kearny Villa Rd., San Diego 12, Calif.

▲ For more details circle **NED-234 G1** on enclosed inquiry slip ▲

Add new "TRAVL-N-LIFT" Technique to your PRODUCT HANDLING with Weld-Bilt "RIDER-BOY"
Self-Propelled
MODEL RB120
PLATFORM LIFT TRUCK





Ride with your load, up, down, forward or backward on new "RIDER-BOY"! Push-button controlled, it lifts rider and load up to 10 foot height. Saves labor, costly power equipment — speeds order-picking, restocking, stacking, storage, work positioning and overhead maintenance.

"RIDER-BOY" is heavy duty battery-powered. Electro-Hydraulic mechanism does all the work, through Trans-Axle Transmission and fluid-type clutch. Built for strength, smooth, effortless operation, complete safety and performance economy.

Write for complete details and prices on new "RIDER-BOY"

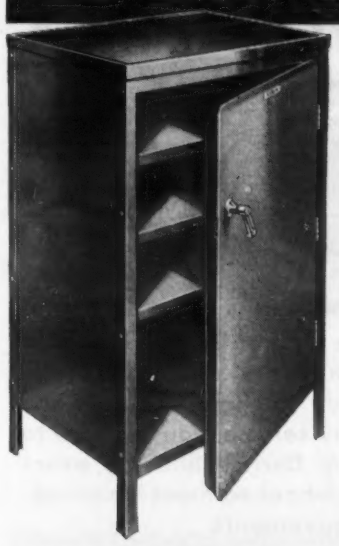
Materials Handling Engineers

"Weld-Bilt" PRODUCTS

WEST BEND EQUIPMENT CORPORATION
311 WATER STREET • WEST BEND, WISCONSIN

▲ For more details circle **NED-235 G1** on enclosed inquiry slip ▲

LYON® TOOL STAND CABINET



Provides top working surface plus lock-up space for valuable tools, dies, precision instruments, etc. Dimensions: 21¼" wide, 15¼" deep, 34" high. Three shelves adjustable every 2". Built-in lock. Top easily reversed to give a flat working surface. Casters available. Finish, gray baked-on enamel.

Write for free 100-page Lyon Catalog

LYON METAL PRODUCTS, INC.
General Offices: 122 Monroe Ave., Aurora, Illinois
Factories in Aurora, Ill.—York, Pa.—Los Angeles
Dealers and Branches in All Principal Cities

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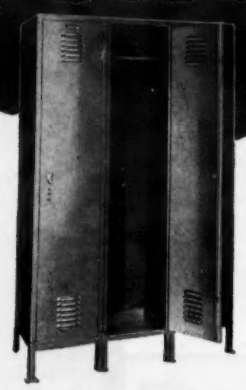
LYON® STEEL LOCKERS



Lyon, the leading manufacturer of steel lockers, offers quality design features which really pay off. All-welded, rigid frame, positive locking action, heavy-duty hinges, streamlined, chrome finger-tip handle (patented). Many types of lockers—single, double, multiple tier, etc., meet every space and capacity requirement.

Write for free 100-page Lyon Catalog.

LYON METAL PRODUCTS, INC.
General Offices: 122 Monroe Ave., Aurora, Illinois
Factories in Aurora, Ill.—York, Pa.—Los Angeles
Dealers and Branches in All Principal Cities

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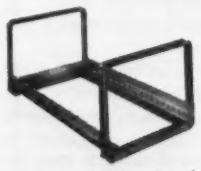
LYON® SHOP BOXES

Built of steel for lifetime service. A wide variety of standard types and sizes . . . or we will design and build special containers to meet unusual requirements.

Steel Boxes won't warp, rot, shrink, splinter or absorb oil and grease. Reduce material handling costs . . . substantially!



STACKING FRAMES (Left) lock together without use of tools. Boxes slide in and out like drawers.

Write for free 100-page Lyon Catalog.

LYON METAL PRODUCTS, INC.
General Offices: 122 Monroe Ave., Aurora, Illinois
Factories in Aurora, Ill.—York, Pa.—Los Angeles
Dealers and Branches in All Principal Cities

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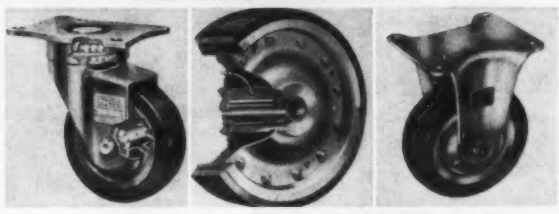
ECONOMIZE– STANDARDIZE–

...WITH

DARNELL LONGER LASTING CASTERS & WHEELS



There is a type of Darnell Caster or Wheel for every kind of use and floor. Made for light, medium and heavy-duty service, you are sure to find in the Darnell line the exact caster or wheel to meet your individual requirements . . .

ASK FOR FREE MANUAL

DARNELL CORPORATION, LTD.
DOWNEY (Los Angeles County) CALIF.
37-28 SIXTY-FIRST, WOODSIDE 77, L.I., N.Y.
36 NORTH CLINTON ST., CHICAGO 6, ILL.
1000 PEACHTREE N. E., ATLANTA, GA.

For more details circle NED-239 G1 on enclosed inquiry slip

BEVERLY *Electric* **THROATLESS SHEAR**

Cuts Any Shape in Metal Easily, at High Speed

Provides 1725 cutting strokes per minute . . . correct speed to handle cutting, trimming and slitting operations in any metal to shear's capacity. Unique downward-forward shearing action provides faster, cleaner cutting; insures longer blade life. Operator's hands are free to feed and guide work through shear—permits accurate cutting to a line or template. Throatless design allows sheet to be turned in any direction during cut. Motor operates on 110V., 60 cycles, AC.

Complete with base and supporting column to provide most efficient and comfortable working height from floor. Can be used with base only as bench shear.

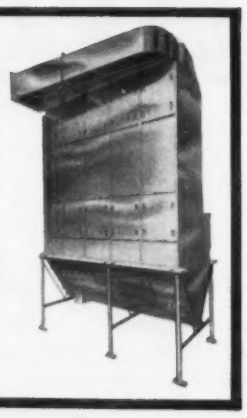
See your nearby Beverly Distributor for a demonstration or write today for illustrated circular.

BEVERLY SHEAR MFG. CO.
3016 W. 111th Street
Chicago 43, Ill.

For more details circle NED-240 G1 on enclosed inquiry slip

TORIT

NEW TORIT DUST COLLECTOR IS AUTOMATIC!



Save real dollars with the benefits from this automatic dust collector. No more interruptions on production lines! Maintenance problems are practically eliminated. This all new continuously cycling TORIT dust collector automatically cleans your air and automatically shakes its own filters and blows them clean with reverse air flow. Collected material is emptied automatically.

OTHER EXCLUSIVE TORIT BENEFITS

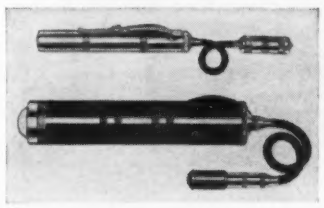
- automatic filter-shaker mechanism is simple, maintenance-free
- different dusts may be collected separately
- highest air-to-cloth ratios (from 5 to 25:1) and longer filter life
- only ¾ H.P. required for fully automatic operation
- polished 3/16" aluminum construction for minimum floor loading
- modular design—5' wide x 4'-8" long (for two sections) x 15'-6" high—saves space, lends ease and versatility to installation. Use up to 12 modular sections for each application! No limit to CFM capacity!

Write today for literature.

TORIT MANUFACTURING CO.
Automatic Collector Division
Dept. 235 • 1133 Rankin Street • St. Paul 16, Minnesota

For more details circle NED-241 G1 on enclosed inquiry slip

INSPECTION FLASHLIGHTS
have rigid and flexible extensions



Light for visual inspection of dies, castings, and machinery in poorly lighted areas is furnished by a series of Flex-Lites. They have aluminum cases, vinyl covered flexible extensions, and use standard batteries. Small Series 300 (top) has a pocket clip lock; rotating head switch; and 6, 12, 18, and 24-in. extensions. Heavy duty Series 200 has standard 9, 18, 27, and 36-in. extensions, with special lengths upon request. Model 500-A with an over-all length of 20 in. includes a 6-in. rigid and a 5½-in. flexible extension. • **Aero-Motive Mfg. Co.**, 1803 Alcott St., Kalamazoo, Mich.

For more details circle NED-242 G1 on enclosed inquiry slip

SAFETY GLASSES
have plastic side shields

Multi-Fit bridge safety glasses now have plastic side shields permanently attached to the temples. Shields provide side and increase frontal protection, allow templates to fold flat, and are available either clear or in green to reduce glare. In addition to Multi-Fit series offered in flesh, smoke, and cordovan colors, shields may be obtained in a two-tone series of frames with fixed or adjustable nose pads. Shields add about 30 cents to the basic price of the frames. • **Fendall Co.**, 2222 W. Diversey Parkway, Chicago 47, Ill.

For more details circle NED-243 G1 on enclosed inquiry slip

LIVE ROLLER CONVEYOR
accumulated cartons do not jackknife

Even badly staggered cartons and crushable commodities can be accumulated under pressure on this controlled pressure live roller conveyor without jackknifing. Pressure exerted on accumulated commodities is only 3½ per cent of carton weight, instead of the usual 12 per cent. When accumulated cartons are released, the entire line moves forward in unison, without lagging or gaps. Conveyor is available in 10½, 14½, 16½, 20½, 26½, 32½, and 38½-in. widths. Total weight of staggered line of cartons shown is 305 lb, yet there is no tendency for it to buckle. • **Standard Conveyor Co.**, 315 N. W. Second St., North St. Paul 9, Minn.

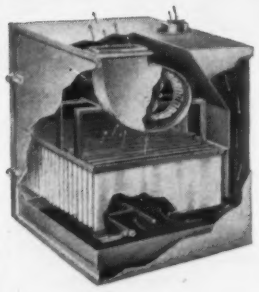
For more details circle NED-244 G1 on enclosed inquiry slip

TORIT

DUST COLLECTORS

keep plants clean lessen employee grievances save valuable dusts

Torit Dust Collectors keep plants clean . . . an important factor in protecting employee health and morale—and in lowering absenteeism and employee grievances. Economical, too, these units are portable. They cost a fraction of central built-ins and are not limited to certain areas. They save heat by recirculating clean, filtered air. And, as in tungsten carbide manufacturing or diamond grinding operations, they pay for themselves in days with the valuable dusts they recover.



Torit Cabinet Cloth-Filter Model. High efficiency collection of all types of dust. Particles are trapped on fine-woven cloth filters—99%+ efficiency (by weight). Clean filtered air is drawn past the motor and blower to keep it cool.

Self contained, portable steel cabinets. Removable doors allow ready access to filters, motors, and blowers. Filters are chemically treated for spark resistance and sealed against leakage. These compact units give maximum filter area in smallest possible space. Capacities range up to 2100 cubic feet per minute. Larger units are built on special order. Prices start at $230.

**For a FREE handbook detailing specifications and performance data of Torit Dust Collectors and applications, write Dept. 229*

TORIT MANUFACTURING CO.
1133 Rankin Street • St. Paul 16, Minnesota

For more details circle NED-245 G1 on enclosed inquiry slip

871B

Improved **FEL-PRO C5-A** "HI-TEMP" ANTI-SEIZE THREAD COMPOUND

delivers MORE dollar value at same LOW COST!

All These New Improvements—
NEW • Lower breaking and running torque
NEW • Non-settling, non-hardening, homogenized composition
NEW • Can be used in below freezing weather
NEW • Increased lubricating and sealing qualities
NEW • Prevents rust and corrosion

Now in tubes and cans

FREE TEST SAMPLE PROVES HOW!

You'll save countless man hours and avoid costly replacement of broken studs, bolts, etc., with the protective cushioning action provided by the colloidal copper composition of C5-A. Improved C5-A Lubricates and Seals for fast, easy application and removal. Gives same protective performance even after high-pressure, high-temperature use, up to 1800° F. Can be used on all metals and plastics.

✓ Ends seizing and galling even up to 1800° F.
✓ Reduces wrench torque
✓ Stops needless stud breakage
✓ Permits repeated re-use
✓ Speeds assembly and disassembly
✓ Prevents galling of stainless steel

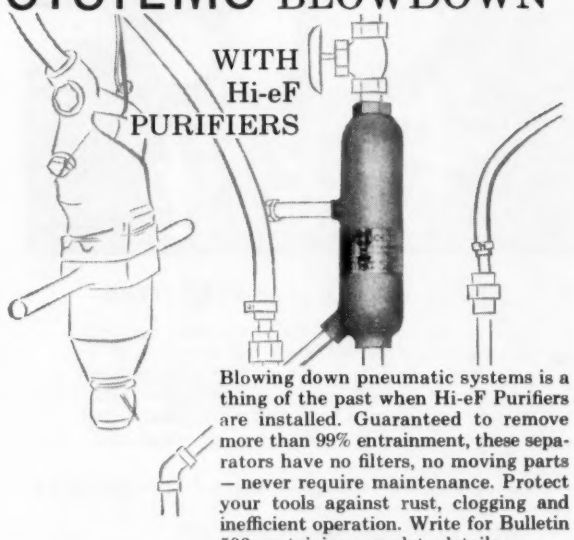
TRY C5-A NOW . . .
Manufacturers, refiners, and power producers find C5-A ideal for boilers, face plate studs, etc. *Write for your free test sample today!*

FELT PRODUCTS MFG. CO.
Dept. 08, 7450 N. McCormick Blvd., Skokie, Illinois

For more details circle NED-246 G1 on enclosed inquiry slip

START UP PNEUMATIC SYSTEMS WITHOUT BLOWDOWN

WITH Hi-eF PURIFIERS



Blowing down pneumatic systems is a thing of the past when Hi-eF Purifiers are installed. Guaranteed to remove more than 99% entrainment, these separators have no filters, no moving parts – never require maintenance. Protect your tools against rust, clogging and inefficient operation. Write for Bulletin 503 containing complete details.

Hi-eF PURIFIER
By the Manufacturers of Super-Silvertop Steam Traps

THE V. D. ANDERSON COMPANY
Division of International Basic Economy Corporation
1988 W. 96th Street Cleveland 2, Ohio

For more details circle NED-247 G1 on enclosed inquiry slip

TORIT

Torit Cyclone Separator Model. High efficiency collection of all types of dust, chips and shavings. Up to 95% of the dust is removed from the air, drawn into the top of cone by centrifugal force, and settled to the dust reservoir below. Clean air is exhausted outside the building or indoors through after filters.

Self contained, compact, portable steel units. End mounted motor and blower mounted in free air for cool operation, is detachable for servicing or relocation of outlet. Cones can be rotated for proper inlet location. Dust reservoir has pull-out drawer for easy cleaning. Individual capacities range up to 6500 cubic feet per minute. Larger units are built on special order.
Prices start at $335.

DUST COLLECTORS STOP LOSSES CAUSED BY DUST

- *machine wear*
- *absenteeism*
- *product damage*

With a Torit Dust Collector, machines stay clean, hold close tolerance up to 80% longer. Dust is kept off bedways, slides, and bearing surfaces. There are fewer accidents because work areas are clean and safe. Employees work more efficiently in clean air, their health protected. And there is no dust in the air to harm fine product finishes.

* For a FREE handbook detailing specifications and performance data of Torit Dust Collectors and applications, write Dept. 230

TORIT MANUFACTURING CO.
1133 Rankin St. • St. Paul 16, Minn.

For more details circle NED-248 G1 on enclosed inquiry slip

Yes, Eagle's New Cycl-Flex Plug-In Counter is as easy to adapt and change as its companion Cycl-Flex Timer. In fact, in mounting and in over-all appearance, they're exactly the same.

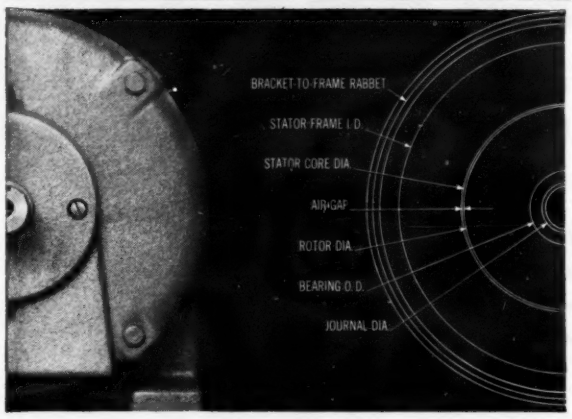
The New Cycl-Flex Counter does more than just count. A large variety of control circuits are yours by utilizing its one instantaneous switch and two delayed switches to control your machines or processes.

Write for Bulletin 725 or call your local Eagle Representative. He's listed in Sweet's Product Design File, Section 7d or in Thomas Register.

SPECIFICATIONS • Count Range — 80 counts • Electric Reset in ½ second • 400 counts per minute • 3-inch diameter quick setting dial with single knob • Switch rating — 10 amps., 115 v., 60 cycle

EAGLE SIGNAL COMPANY • Moline, Illinois
INDUSTRIAL DIVISION
A DIVISION OF THE GAMEWELL COMPANY, AN E. W. BLISS COMPANY SUBSIDIARY

For more details circle NED-249 G1 on enclosed inquiry slip



A motor is a series of circles

which must be *accurate* and *concentric* if the motor is to run quietly, smoothly and trouble-free for a long time. Elliott uses highly precise manufacturing methods to assure smooth, dependable, economical operation of all C-W motors.

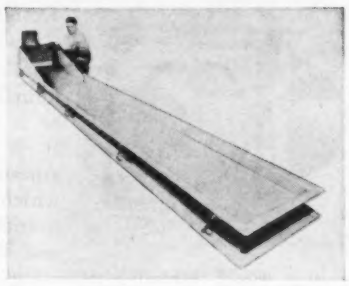
Send for bulletin *The Fine Art of Building Better Motors*, which describes some of the precision operations used in building Elliott C-W integral h.p. motors.

W1-5

ELLIOTT COMPANY
GENERAL OFFICES: JEANNETTE, PENNSYLVANIA
PLANTS: Jeannette and Ridgway, Pa.; Springfield, Ohio

For more details circle NED-250 G1 on enclosed inquiry slip

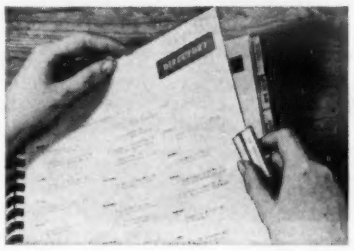
PNEUMATIC CONVEYOR FEEDER
moves 30 tons of bulk per hour



Bulk or granular materials, or assembly parts are moved at rates up to 30 tons per hour by Model NF-6-168 pneumatic conveyor feeder. Unit measures 16 ft 8 in. long and has a 24 x 4-in. trough. It is operated by a Navco BH4 air vibrator with one-piece design which features a silent type vibrator piston as the sole moving part. Flow rate is changed by adjusting the air pressure range from 20 to 70 psi. • **National Air Vibrator Co.**, 435 Literary Rd., Cleveland 13, Ohio.

For more details circle NED-252 G1 on enclosed inquiry slip

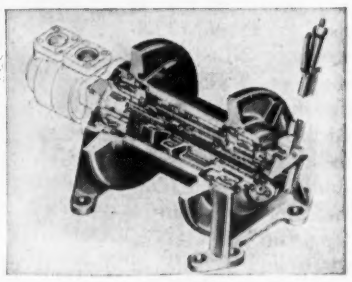
SELF-STICKING INDEX TAB
protected by Mylar overlay



Easy-to-use Labelon self-sticking index tab is simply typed or written upon, cut to desired length, and folded over the protective Mylar covering of a file folder. Tab can be extended to the top of the folder, or mounted flush with the top. It is protected by a Mylar overlay and cannot be soiled, marred, or easily torn. Tab is ⅝ in. wide and comes in a 6-in. strip. It accommodates up to three lines of type, as well as two additional lines below the border. Tab is offered with black, blue, red, yellow, or green borders, and is priced at $1.25 per box of sixteen 6-in. strips. • **Labelon Tape Co.**, 10 Chapin St., Canandaigua, N. Y.

For more details circle NED-253 G1 on enclosed inquiry slip

PLANETARY WINCHES
10,000 to 90,000-lb capacities



Mechanical, electrical, or hydraulic drives can be used with the Carco P Series of planetary winches. The lightweight, compact units are designed for use where weight and/or space are primary considerations. Four models have capacities from 10,000 to 90,000 lb. Applications include rubber tired and track laying tractors, hoisting motors, conveyor drives, truck winches, and tractor side booms. • **Pacific Car & Foundry Co.**, Renton, Wash.

For more details circle NED-254 G1 on enclosed inquiry slip

ASSEMBLIES MOVE SMOOTHLY WITH VER-T-BENCH UNITS

A truly DeLuxe assembly unit.

Many Advantages of Ver-T-Bench Units

More working area and assembly space

More storage space for finished work

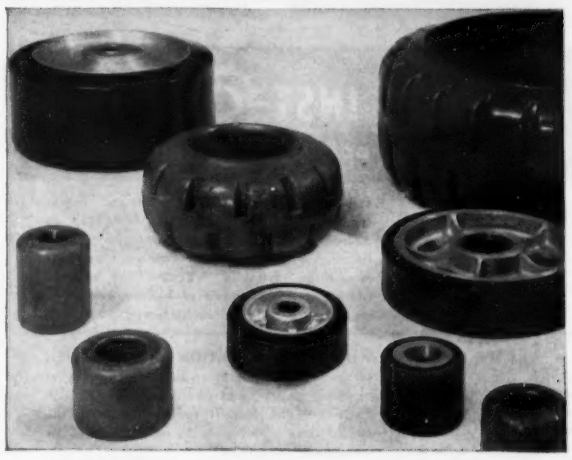
Saves Man Hours · Saves Floor Space

No more clogged aisles No more littered tables

Write today for Descriptive Literature

THE Vince BASNIK COMPANY
MATERIAL HANDLING DIVISION
• 2020 CENTER STREET • CLEVELAND 13, OHIO

For more details circle NED-255 G1 on enclosed inquiry slip



NEW URETHANE WHEELS OF DU PONT ADIPRENE® OUTLAST RUBBER 5 TO 1

Here's an entirely new kind of resilient material for industrial wheels . . . ADIPRENE, a urethane elastomer made possible by Du Pont research.

Solid tires, caster and pallet wheels made from this new Du Pont elastomer carry far heavier loads than conventional rubber wheels, yet are resilient, non-marking. They resist oils, mild acids and alkalies, temperature extremes, weathering and aging.

And most important, ADIPRENE wheels outlast conventional rubber wheels by many times. Their resistance to abrasion, cutting, chipping and abuse is outstanding. In one plant, they outlasted rubber eight times. In another, where rubber wheels usually lasted only a few days, they were still in good condition after *six months.* Four- and five-fold increases in service life are common.

Send the coupon today for complete information.

E. I. du Pont de Nemours & Co. (Inc.)
Elastomer Chemicals Department NED-7
Wilmington 98, Delaware

☐ I would like to know more about ADIPRENE industrial wheels. Please send literature and list of manufacturers.
☐ I am particularly interested in the following types of wheels _____
☐ Other information _____
Name _____
Firm _____
Address _____
City _____ State _____

DU PONT REG. U. S. PAT. OFF.
ADIPRENE® URETHANE RUBBER

Better Things for Better Living . . . *through Chemistry*

For more details circle NED-256 G1 on enclosed inquiry slip

CONTROL

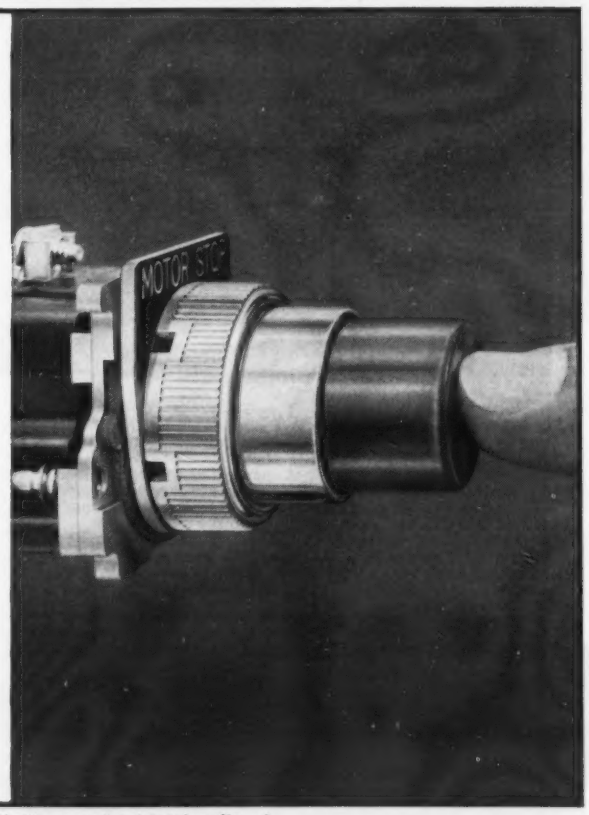
New! Versatile Cutler-Hammer oiltight pushbuttons let you make any station you want

The new interchangeability built into these operators lets you create the station you want from a complete selection of Cutler-Hammer pushbuttons. Get them in one hole or base mounting, 6 bright colors. Thirty different circuit arrangements can be made in hundreds of varieties of stations in standard arrangements of up to 25 elements. Get up to 8 circuits on one pushbutton. They take 40% less back-panel space than next smallest unit so you get more control in less space. Get facts in PUB. EL-178B-N251.

WHAT'S NEW? ASK...

CUTLER-HAMMER

Cutler-Hammer Inc., Milwaukee, Wisconsin • Division: Airborne Instruments Laboratory • Subsidiary: Cutler-Hammer International, C. A. • Associates: Canadian Cutler-Hammer, Ltd.; Cutler-Hammer Mexicana, S.A.



For more details circle NED-251 G1 on enclosed inquiry slip

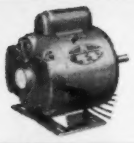
FILTERS air to protect costly tools
REGULATES air pressure to exact needs
LUBRICATES moving parts to cut wear

When you design with air, start each circuit with a Schrader Lub-Air-Ator to keep valuable equipment running at peak efficiency. This important maintenance device lengthens equipment life. You can use one, two, or all three sections, individually or in combination. Compact. No moving parts. Can be serviced without disturbing pipe connections. Specification literature on request.

Schrader a division of SCOVILL
A. SCHRADER'S SON
Division of Scovill Manufacturing Co., Inc.
459 Vanderbilt Ave., Brooklyn 38, N. Y.
QUALITY AIR PRODUCTS

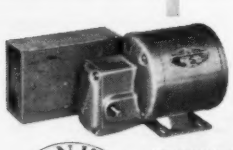
For more details circle NED-257 G1 on enclosed inquiry slip

Franklin Motors INST-O-VERSE®
FOR NEW PRODUCT APPLICATION



FULL TORQUE CAPACITY for instant reversing available in 1 ph., 1725 RPM, 115 or 230 V., 1/6 through 1 H. P. sleeve or ball bearing motors. NEMA frame or special mountings. Franklin INST-O-VERSE enables use of 1-phase instead of 3-phase reversing motors . . . and the cost is less.

WHERE GEAR REDUCTION is required, ratios to specifications with epicyclic, worm, bevel or other gears open new applications with INST-O-VERSE instant reversability. Single or multiple shaft outputs with manual or automatic selectivity.



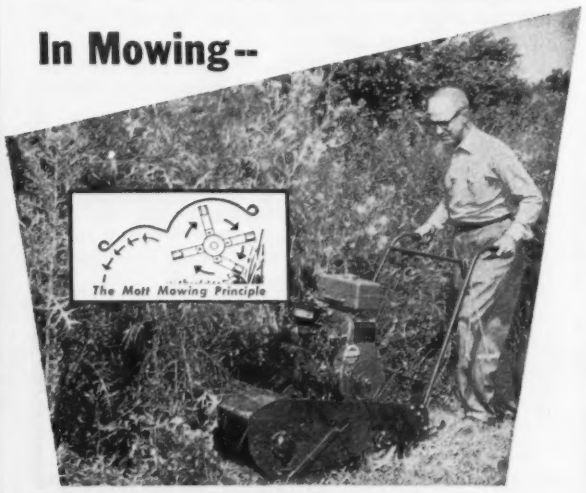
GEAR-O-MATIC includes all functional benefits of any signal-transducing system applied to energize or instantly reverse geared power unit. Limit switches, automatic safety stop and provision for remote control are built into this package.

"FRANKLINEER" YOUR PRODUCT FOR DEPENDABILITY
Write for INST-O-VERSE facts folder

FRANKLIN ELECTRIC
Franklin Electric Co., Inc.
BLUFFTON, INDIANA

For more details circle NED-258 G1 on enclosed inquiry slip

In Mowing--



IT'S THE BLADE THAT COUNTS!

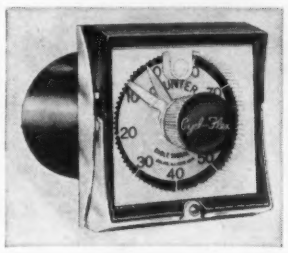
The free-swinging, flail type blades of the MOTT Hammer-Knife are heavy enough to cut dense growth of grass yet light enough to fold back when striking obstructions, thus minimizing flying objects and the damage and injury caused by them.
Only MOTT has the patented, self-cleaning cutting angle on the blade that permits mowing in all conditions—dry or wet!
Designed to withstand the stresses encountered when used under the most rugged mowing conditions. Available in a full range of models—from 18" to 19 ft. gangs.

You can mow with MOTT . . . where others cannot
Details on request.

mott® HAMMER KNIFE
MOTT CORPORATION
500 Shawmut Ave., La Grange, Ill.
Address mail to: P. O. Box 278-19, La Grange, Ill.

For more details circle NED-259 G1 on enclosed inquiry slip

PLUG-IN IMPULSE TIMER
opens or closes after preset count

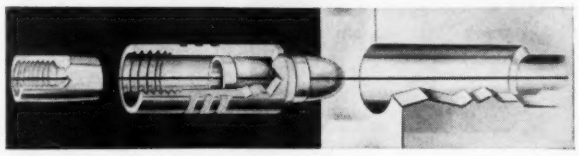


Designed to open or close a switch after a preset number of counts, Bulletin 725 Cycl-Flex counter is spring reset to zero. It is thus applicable to automatic control circuits which must function from counts. Readily serviced and furnished in a plug-in case, timer includes two single-pole double-throw 5-amp delayed switches which trip at end of count. Another switch is operated instantly at the beginning of the count. Maximum speed is 400 counts per minute. Count is easily set on dial. It operates on 115-v ac. • **Eagle Signal Co.**, 202 20th St., Moline, Ill.

For more details circle NED-260 G1 on enclosed inquiry slip

FLUID FLOW RESISTOR
easily installed in reamed hole

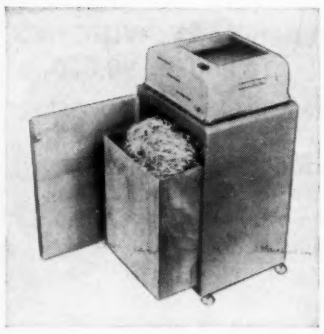
Flow tested to any specified tolerance, Lee Jet fixed fluid flow resistor has a 100-mesh filter screen on each side of its calibrated orifice. Flow may be in either



direction. Unit is inserted into a reamed hole, then locked and sealed by a pin. Jet and pin are easily removed for reuse by means of an extraction tool. Over-all length is 0.550 in. and diameter is 0.1875-0.1880 in. Maximum orifice size for this body is 0.050 in. • **Lee Co.**, Westbrook, Conn.

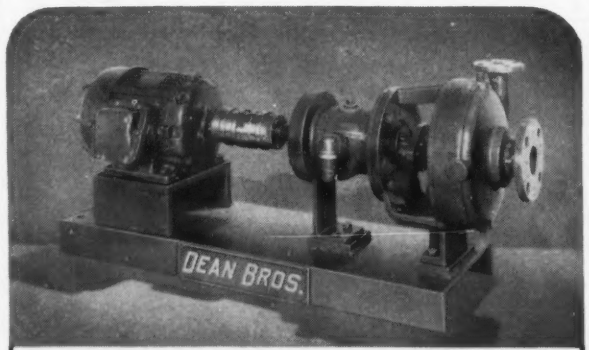
For more details circle NED-261 G1 on enclosed inquiry slip

OFFICE PAPER SHREDDER
destroys confidential papers



Confidential office papers and classified material are converted into 3/64-in. shreds by this No. 1 MM Destroyit office paper shredder. Extremely fine shreds are deposited in removable waste bin housed in base of cabinet. Machine is operated by a pushbutton type on-off-reverse switch and is safe to use. It plugs into any 115-v outlet. It will also produce up to 88 lb of shredded paper per hour for packing or shipping purposes. Price is $395. • **Michael Lith Sales Corp.**, 145 W. 45th St., New York 36, N. Y.

For more details circle NED-262 G1 on enclosed inquiry slip



For Greatest Savings in Pumps
Get a Dean Brothers GS

Here is the pump that put *service* back into pumps. And with Dean Brothers exclusive service parts policy, no worry about down time waiting for obsolete replacement parts . . . there are no such things. One day delivery. Consult yellow pages for nearest representative, or wire, phone or TWX direct for fast dependable service.

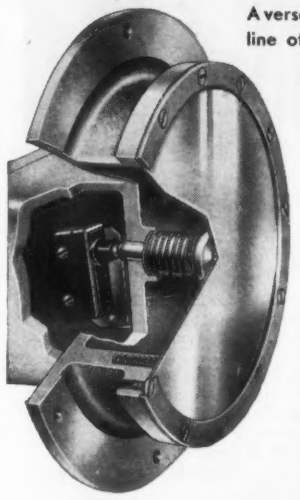
Type GS Standard Centrifugal Pumps
For general, industrial and chemical service
Capacity: to 300 gpm @ 1750 rpm—to 600 gpm @ 3500 rpm
Head: 20 to 80 ft @ 1750 rpm —80 to 300 ft @ 3500 rpm
Pumping Temperature: —150° F to plus 350° F
Working Pressure: to 180 psig @ 350° F

For Full Information Ask for Circular 190

DEAN BROTHERS PUMPS INC.
INDIANAPOLIS 7, INDIANA
The Best Is Our Standard

For more details circle NED-263 G1 on enclosed inquiry slip

NEW
AUTO-BIN-DICATOR*
AUTOMATIC BIN LEVEL INDICATOR



A versatile addition to the Bin-Dicator line of bulk material level controls.

NEW corrosion-resistant construction
NEW stainless steel diaphragm
NEW super-sensitive operation

Explosion-proof and general purpose models listed by Underwriters' Laboratories, Inc.

Prevents overflowing of bins, clogging of conveyors, choking of elevators, damage to machinery; cuts operating costs. Provides simple, reliable, positive control at low cost.

WRITE *for Bulletin AB-19 or call* TUxedo 2-3000

THE BIN-DICATOR CO.
17190-A Denver • Detroit 24, Mich.
*TM PATENT PENDING

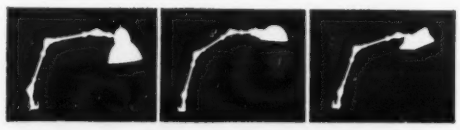
WE SELL DIRECT • PHONE ORDERS COLLECT

For more details circle NED-264 G1 on enclosed inquiry slip

FOSTORIA

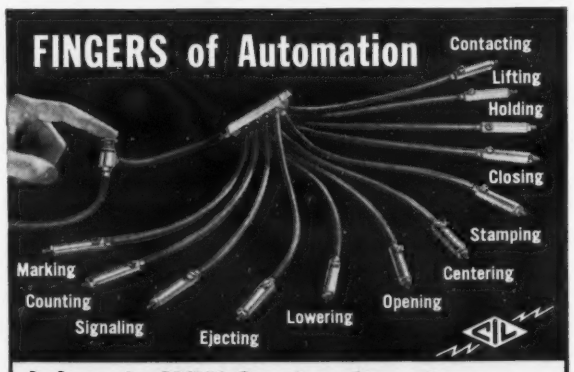
BALANCED® LIGHTING PROMOTES INDUSTRIAL SPEED

Speed on the production line is the result of skill. But skill is the result of confidence, and without proper work area lighting confidence is reduced. However, BALANCED® lighting in critical work areas allows production people to work fast with accuracy and safety. Ask a Fostoria representative to check your production line for BALANCED® lighting. No obligation. Write for free copy of "CRITICAL WORK AREA LIGHTING."



FOSTORIA CORPORATION • FOSTORIA, OHIO
MANUFACTURERS OF CRITICAL WORK AREA LIGHTING

For more details circle NED-265 G1 on enclosed inquiry slip



Industry's ONLY Complete Line of Miniature Cylinders, Valves and Accessories!

If you have a fluid power design problem where savings in space, weight, or cost must be solved, learn how CLIPPARD Miniature Air and Hydraulic devices can help you. Included in industry's ONLY COMPLETE miniature line are cylinders of 3/8" thru 7/8" bore, valves, valve solenoids, flow controls, quick connects, programmers, manifolds, fittings, tubing and accessories. All are interchangeable and are limited in usefulness only by the scope of your imagination. WRITE FOR COMPLETE CATALOGING, NOW!

Clippard Minimatics

Clippard INSTRUMENT LABORATORY, INC.
7378 Colerain Rd., Cincinnati 39, O. • Phone: JAckson 1-4261
Manufacturers of Miniature Pneumatic Devices, R.F. Coils, Electronic Equipment

For more details circle NED-266 G1 on enclosed inquiry slip

For Accuracy, High Capacity, Low Maintenance

Mason-Neilan 200 Series steam reducing valves are designed to save you money through . . . ACCURACY — sensitive pilot operation insures rapid response to load requirements; unaffected by variations in inlet pressure.

HIGH CAPACITY — pilot operation and large flow passages provide large capacity, may permit use of a smaller valve, thus saving in initial cost.

LOW MAINTENANCE COST — ease of access to parts in pilot and main valve speeds up maintenance; cleaning is easy, reducing down-time.

Get all the details on the cost-saving features of Mason-Neilan 200 Series Reducing Valves. Ask your Industrial Distributor for catalog, or write.

Products that work for your profit

MASON-NEILAN

Division of Worthington Corporation

69 NAHATAN STREET, NORWOOD, MASSACHUSETTS MN1-10

For more details circle **NED-267 G1** on enclosed inquiry slip

VERS-O-LINE

bearings by Hartford

PRE-VALUE ANALYZED FOR YOUR PRODUCT

Design possibilities for one economical unit to replace several more costly integral parts are almost limitless. Hartford engineers can adapt a bearing from a wide variety available in stock or can imagineer a new design to your specifications. Nationwide Sales Engineering at your service.

Hartford Vers-O-Line types include:

RADIAL H-Series | RADIAL Conrad Loaded | RADIAL Full Complement | THRUST | VERSA-TWIN Twin Row

TYPICAL EXAMPLE

BEFORE—Six separate parts, expensive bearings and costly to assemble. **AFTER**—One complete economical assembly, reduced parts, maximum stability.

Write on company letterhead for technical literature, case history applications and bearing ideas.

Specify Hartford PRECISION BALLS & BEARINGS

Hartford Steel Ball Co., 84 Jefferson Ave., West Hartford, Conn.

WITH A GRACO *FAST-FLO* PUMP

Transport your liquids or semi-liquids to point of use with a Graco Fast-Flo Pump . . . *and show tremendous savings by cutting unnecessary plant traffic.*

Air powered, the Fast-Flo doesn't require expensive electrical wiring. Fits all standard drums.

Some plants handle up to 25 different materials this economical Graco way.

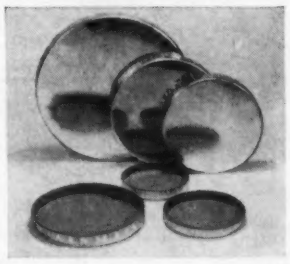
Investigate today. See how you can profit with Graco direct-from-drum transfer pumps in your plant.

GRACO ENGINEERS & MANUFACTURERS / **GRAY COMPANY, INC.** 77 Graco Square Minneapolis 13, Minnesota

See Phone Book Yellow Pages "Spraying" for Graco Suppliers

For more details circle **NED-268 G1** on enclosed inquiry slip

METAL TUBE CLOSURES
protect metal ends and threads



Line of paper-lined, tin-plated metal tube closures permits fast, secure sealing of pipe and other open-end cylinders. Heavy paper lining grips tube ends securely, protecting threads or finished end surfaces from damage during handling and shipment. Closures also make products easier to see and identify. • **Protector Products, Inc.**, 2144 W. 15th St., Cleveland 13, Ohio.

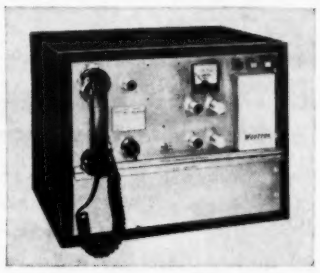
For more details circle **NED-269 G1** on enclosed inquiry slip

MINIATURE END MILLS
are made of high speed steel

Two and four flute, stub and long lengths, and single and double end styles are available in the Thriftmite line of precision ground, miniature, high speed steel end mills. All have 3/16-in. diameter shafts and cutter diameters from 1/32 to 3/16 in. They are usable for plunge cutting, slotting, contour cutting, profiling, and general purpose end milling on virtually all materials including fiber, laminates, thin synthetics, metals, and alloys. • **Brown & Sharpe Mfg. Co.**, Cutting Tool Div., Providence 1, R. I.

For more details circle **NED-270 G1** on enclosed inquiry slip

RADIO TRANSCEIVER
eight different channels available



Self-contained Model 9B transceiver is a 100-w single sideband transmitter and a high sensitivity receiver, designed for radio communication from fixed or field stations. A built-in test meter makes possible a point-by-point check of the equipment. Entire system is mounted in a steel cabinet for desk or bench mounting or for field use. Its two modules can be removed for mounting in a standard 19-in. rack for fixed station use. Any of four preset channels in a 2 to 15-mc range on either upper or lower sideband can be selected, making a total of eight channels available. Transmitter and receiver can be operated on the same or different frequencies. Operation is on 110-v, 50/60-cycle ac. Price is $1600. • **Westrex Co.**, 540 W. 58th St., New York 19, N. Y.

For more details circle **NED-271 G1** on enclosed inquiry slip

Production Model

CHECK THESE FEATURES!

1. A low cost 5 gallon airless unit.
2. Weighs only 46 pounds, yet does the work of units much heavier.
3. Instant-latch cover and ease of cleaning gives the Monark "greased lightning" color changing speed!
4. Airless operation eliminates overspray and bounce-back . . .
5. Handles anything from protective coatings to precise final finishes.
6. Works direct from 1 or 5 gallon containers.

WHAT MORE COULD YOU WANT!

For more details, see your GRACO *dealer or write:*

TRY IT BEFORE YOU BUY!

GRACO ENGINEERS & MANUFACTURERS / **GRAY COMPANY, INC.** 77 Graco Square Minneapolis 13, Minnesota

See Phone Book Yellow Pages "Spraying" for Graco Suppliers

For more details circle **NED-272 G1** on enclosed inquiry slip

NOW

automatic, precision drilling every time

Rugged, air-powered Gardner-Denver "Tru-Feed"® drilling units drill holes up to 1½" in diameter even in hardest metals. Positive mechanical feed assures clean, accurate holes. Precise control of entire operating cycle, and full-power operation at any speed, give smooth, fast performance. Drill's adjustable, rapid advance and sensitive thrust-control features are big cost-savers in production drilling. Available in either portable or stationary models. Bulletin 96.

GARDNER-DENVER Since 1859

EQUIPMENT TODAY FOR THE CHALLENGE OF TOMORROW

Gardner-Denver Company, Quincy, Illinois
In Canada: Gardner-Denver Company (Canada), Ltd., 14 Curity Ave., Toronto 16, Ontario

GARDNER-DENVER

For more details circle **NED-273 G1** on enclosed inquiry slip

What makes the first gear-type coupling still first choice?

Check design . . . and you'll find Fast's Couplings (the original gear-type couplings) are superbly engineered, ruggedly built, smoothly running units that are designed to outlast the machines they connect.

Check completeness of line . . . and you'll find Fast's Couplings in a complete range of sizes and types for shafts from ½" to 32" and larger.

Check service . . . and you'll find Fast's Couplings are backed by expert help from experienced field engineers . . . while outstanding stock facilities throughout the country insure speedy delivery of your coupling orders.

Check popularity . . . and you'll find Fast's Couplings are the choice of more equipment manufacturers than any other shaft coupling.

Check Fast's for your coupling needs today.

KOPPERS COMPANY, INC., 707 Scott Street, Baltimore 3, Md.

KOPPERS **FAST'S COUPLINGS**
Engineered Products Sold with Service

For more details circle **NED-274 G1** on enclosed inquiry slip

It Will Pay to Investigate

GRACO HYDRA-CAT PROPORTIONING EQUIPMENT FOR DUAL COMPONENT MATERIALS

• A complete system designed for handling 2-component, chemically reactive materials, *the Hydra-Cat sprays most epoxies, polyesters and polyurethanes.*

An air-powered unit pumps the 2 materials, proportions them in the exact ratio, filters them and powers their transfer through flexible hose to a dispensing head. There they are blended, homogenized and applied by airless spray.

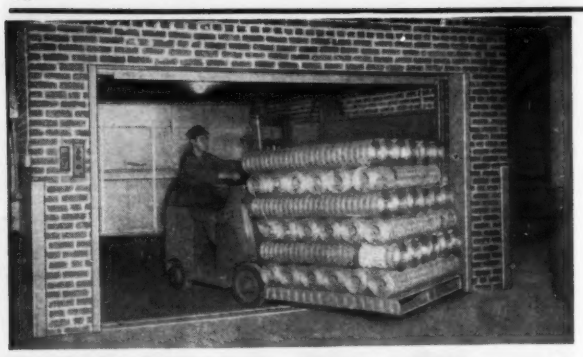
This elimination of atomizing air for spraying cuts waste and increases safety.

Write for complete details.

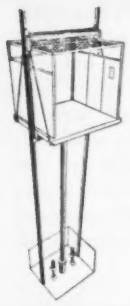
GRACO ENGINEERS & MANUFACTURERS / **GRAY COMPANY, INC.** 77 Graco Square Minneapolis 13, Minnesota

See Phone Book Yellow Pages "Spraying" for Graco Suppliers

For more details circle **NED-275 G1** on enclosed inquiry slip



SAVE UP TO 25% ON ELEVATOR COSTS



Using dependable hydraulic power, Rotary Oildraulic Elevators operate with maximum efficiency. Power is applied directly to the load . . . no lost motion or wasted energy. The elevator car is supported by a powerful hydraulic jack, eliminating the need for heavy load-bearing shaftway and overhead machinery. Capacities to 100,000 lbs. Installed and serviced by a nationwide organization. Write for catalogs.

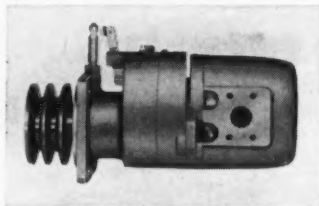
ROTARY OILDRAULIC® ELEVATORS

Rotary

Rotary Lift Company
Division of Dover Corporation
1026 KENTUCKY • MEMPHIS 2, TENN.

For more details circle NED-276 G1 on enclosed inquiry slip

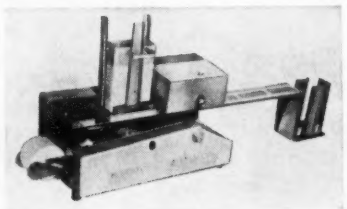
HYDRAULIC POWER TAKE-OFF for driving vehicle attachments



Applicable to practically any mobile equipment such as power trucks, tractors, and utility trucks, C-100 and C-200 power take-offs consist of a remote controlled Touch-O-Matic clutch and Berry-Douty hydraulic gear pump. Unit is connected to engine by belt, gear, or direct drive. It provides no-load engagement speeds from idle to 2200 rpm. Seven models have outputs ranging from ½ to 30 hp and flows from 1.7 to 26 gpm. • **Oliver Tyrone Corp.**, Berry Hydraulics Div., Corinth 1, Miss.

For more details circle NED-279 G1 on enclosed inquiry slip

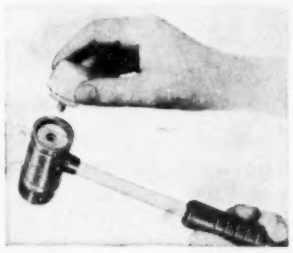
ELECTRIC ADDRESSING MACHINE prints 3600 addresses per hour



Stencil plates made on any office typewriter are used by the Nordamatic Addressor electric addressing machine. It obtains more than 10,000 impressions from a plate and can print 3600 addresses per hour. It has automatic adjustment to the thickness of material being printed and provides for isolating the inking roller when the printing cycle is completed. Other features include enclosed ink reservoir, built-in oscillating ink transfer roller, pushbutton controls, autotape printing for addressing gum labels and proofing onto rolls of tape, and skip and reject for selecting and printing certain precoded stencils from any group. • **Nord Photocopy & Electronics Corp.**, 300 Denton Ave., New Hyde Park, N. Y.

For more details circle NED-280 G1 on enclosed inquiry slip

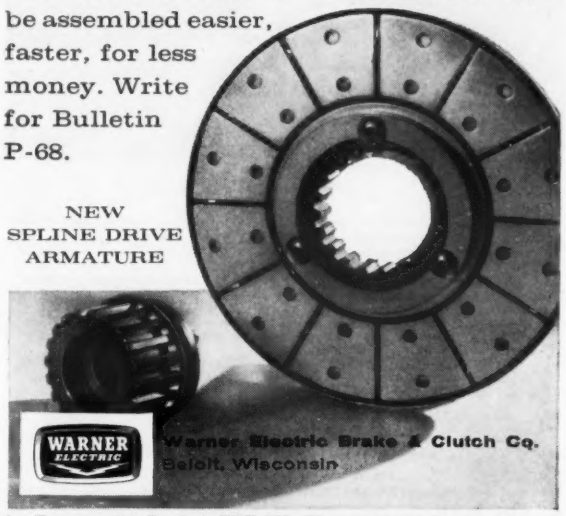
SOFT-FACED HAMMER has glass fiber handle



Threads which are made nonstripping by utilizing a floating nut encased in polyurethane foam are incorporated in the head of this soft-faced safety hammer. It has a unidirectional glass fiber handle fitted with a durable linear polyethylene grip, epoxy bonded to the nonsparking hammer head. Twenty-eight sizes from 4 oz to 20 lb have interchangeable and replaceable faces in a range of hardnesses. • **New Plastic Corp.**, 1026 N. Sycamore Ave., Los Angeles 38, Calif.

For more details circle NED-281 G1 on enclosed inquiry slip

For high-cycle machinery: There's a big, new difference in electric brakes and clutches—Warner's optional spline drive armature. A difference you can measure in reduced maintenance on high-cycle drives because the precision splined hub distributes the load evenly, with no backlash. A difference in your cost, too, because hub and armature both can be assembled easier, faster, for less money. Write for Bulletin P-68.



For more details circle NED-282 G1 on enclosed inquiry slip

ANY PRODUCT IS BETTER WITH CONTINENTAL RED SEAL POWER

Horizontal Shaft. Also available with 6:1 gear reduction (AR Series)—2 to 4 HP

Vertical shaft—2 to 3 HP

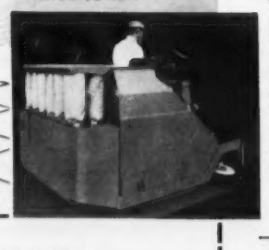
• . . . because Continental air-cooled engines are built up to a standard of excellence, not down to a price. Their rugged design and construction assures long dependable service with minimum down-time. Backed by a world-wide service organization.

Continental Motors Corporation
INDUSTRIAL AIR-COOLED ENGINE DIVISION
12800 KERCHEVAL AVENUE • DETROIT 15, MICHIGAN

For more details circle NED-277 G1 on enclosed inquiry slip

WILSHIRE NEW 4400 INDUSTRIAL POWER SWEEPER

- Variable Speeds
- Sweeps 68" path
- Holds ½ ton



CUT SWEEPING COSTS WITH THIS MAINTENANCE-FREE SWEEPER

engineered so the Maintenance Department can Add to the Net Profit of your company!

An 18 HP, 2-cylinder, 4-cycle gasoline engine powers the all-new 4400 sweeper. Two speed transmission. One foot pedal controls forward, reverse and hopper dump. Heavy duty drive chain runs in oil—permanently sealed. Self-adjusting idler pulleys. Operator controls pressure of full floating main broom and side brushes. Exclusive 12-bag filtering system. Covers a minimum of 120,000 sq. ft. per hour.

TOUGH . . . POWERFUL . . . DEPENDABLE

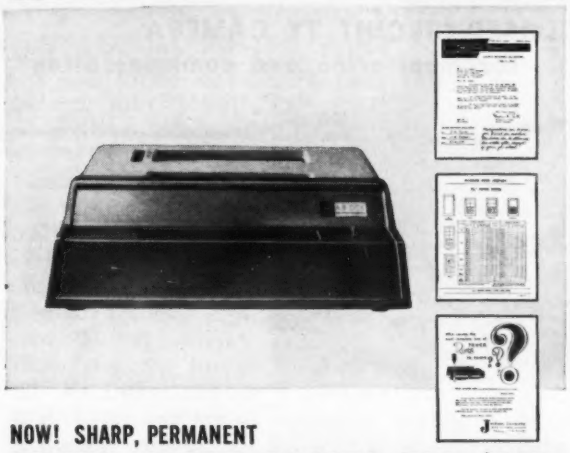
Rough treatment and constant use won't hurt this solid steel "baby." The Wilshire 4400 is plenty rugged, yet simple to operate and fully maneuverable even in crowded areas. Insist on a competitive demonstration before you buy. For guaranteed machine amortization, specify the new Wilshire 4400—*tops in power sweepers!*

SEND FOR PROOF TODAY!
WILSHIRE POWER SWEEPER CO., Dept. NED-761, Toledo 2, Ohio
Please rush literature and specifications. ☐ We would also like a free demonstration.
Name_____ Title_____
Company_____
Address_____
City_____ State_____

LINCOLN
LINCOLN Floor Machinery Co. and WILSHIRE Power Sweeper Co.
divisions of AMERICAN-LINCOLN CORPORATION

For more details circle NED-278 G1 on enclosed inquiry slip

For more details circle NED-283 G1 on enclosed inquiry slip



NOW! SHARP, PERMANENT

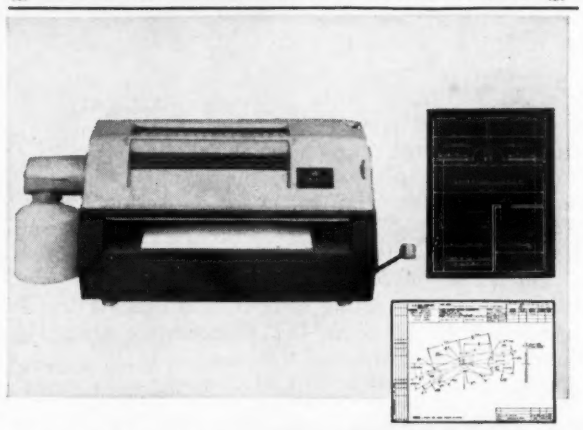
PHOTO-EXACT COPIES FOR $99.50

For just $99.50—quick copies of any printed, duplicated, typed or written document. A. B. Dick Model 101 Photocopier makes clear, black-on-white copies that won't fade from heat, light or age. Reduces paperwork costs, prevents embarrassing errors, steps up efficiency. At $99.50, you can afford one in every department—purchasing, production, accounting, receiving. Write for new brochure, "QUICK COPIES."

Price shown is manufacturer's suggested retail price, subject to change without notice

A·B·DICK DUPLICATING PRODUCTS

For more details circle NED-284 G1 on enclosed inquiry slip



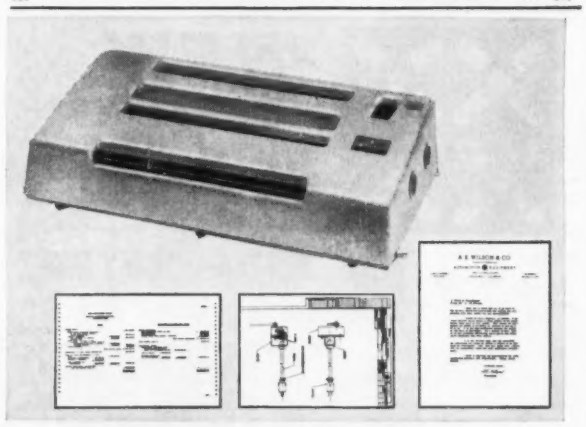
BLUEPRINTS, DIAZO PRINTS—THIS MACHINE MAKES

COPIES OF ANYTHING

If you can put it down on paper, you can pick it up with the A. B. Dick Model 110 Photocopier. Originals can be on opaque, two-sided or transparent paper—white or colored, heavy cardboard, individual sheets or pages bound in books. It takes only seconds, costs only pennies. Copies are permanent—often clearer than the original. Write for color brochure.

A·B·DICK DUPLICATING PRODUCTS

For more details circle NED-285 G1 on enclosed inquiry slip



NEWEST A·B·DICK PHOTOCOPIER PRODUCES

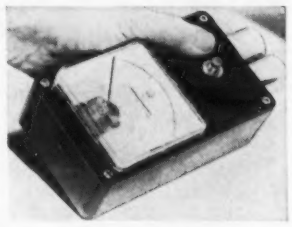
COPIES UP TO 15" WIDE

It's the all-purpose Model 114—the ultimate in time and money-saving photocopying convenience. With it you can now efficiently handle dozens of copying jobs up to 15" wide—any length—in seconds. Makes sharp, permanent copies of anything typed, printed, duplicated, written or drawn in any color—any ink, pencil or crayon, often cleaner than the original. Send coupon for complete details.

A·B·DICK DUPLICATING PRODUCTS

For more details circle NED-286 G1 on enclosed inquiry slip

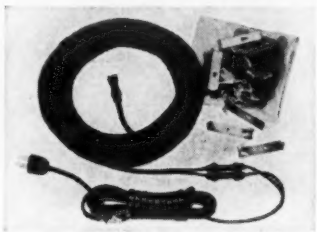
ELECTRONIC TACHOMETER
checks speeds from 0 to 12,000 rpm



Measuring only 7½ x 3¾ x 2⅝ in., weighing 2 lb, and costing $95, this Photo Tachometer is a battery-powered electronic instrument. It uses a light-sensitive photoelectric cell which responds to minute changes in light to transmit a signal to a pulse-triggered computer which determines the speed and displays the results on a meter dial in the range of 0 to 12,000 rpm. A built-in miniature light adapts the device for use in poorly lighted areas. Long-life mercury batteries power the computer, and pen light batteries furnish the light. • **Pioneer Electric & Research Corp.**, 743 Circle Ave., Forest Park, Ill.

For more details circle NED-287 G1 on enclosed inquiry slip

HEATING CABLE KIT
prevents winter thaw damage



Safe source of heat to eliminate ice jams on roof edges and in gutters and downspouts is provided by the Easy-Heat roof cable kit. It prevents winter ice thaw and water damage to roofs, ceilings, insulation, and walls by melting channels so that water will not back up under roofing or shingles. Included are heating cable encased in waterproof vinyl insulation, a 10-ft non-heating lead wire with molded plug, and shingle clips. The 120-v models in 20 to 100-ft lengths protect roof edges from 10 to 50 ft long, and 240-v models in 40 to 200-ft lengths are for 20 to 100-ft roof edges. • **Easy-Heat, Inc.**, Lakeville, Ind.

For more details circle NED-288 G1 on enclosed inquiry slip

INDICATOR LIGHTS
subminiature units are water-tight

All-angle visibility of this line of subminiature indicator lights is afforded by their stovepipe-shaped lens of high heat plastic, available in six translucent and seven transparent colors. Water-tightness on the face of the panel is achieved by means of two 1/16-in. thick neoprene retained O-ring seals. Each fully insulated light is 1 3/16 in. long over-all and mounts in a single 15/32-in. clearance hole. Light source is a T-1¾ midget flanged base, 1.3 to 28-v incandescent lamp. Brass terminals have elongated slots and are tinned for easy soldering. Sample may be requested on company letterhead. • **Dialight Corp.**, 60 Stewart Ave., Brooklyn 37, N. Y.

For more details circle NED-289 G1 on enclosed inquiry slip

NEW A·B·DICK AZOFAX PROCESS MAKES

DUPLICATING MASTERS IN 4 SECONDS

Turns a sheet of lightweight paper (and the data written, typed, drawn or printed on it) into a duplicating master in 4 seconds—automatically. Cuts cost of duplicated copies to less than ½¢ each. Speeds engineering and change paperwork . . . reduces size and cost of multi-part carbon sets . . . frees office personnel from master preparation . . . eliminates costly overloads on diazo and whiteprinters . . . gets all copies needed of output from teleprinters, tabulators and automated business machines. Send coupon for free 4 page folder.

A·B·DICK DUPLICATING PRODUCTS

For more details circle NED-290 G1 on enclosed inquiry slip

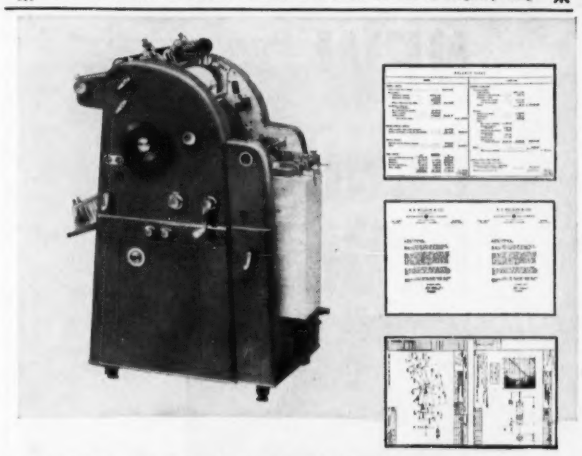
NOW EVERY OFFICE CAN HAVE

OFFSET COPIES AT LOW COST

The prestige and print quality of true offset—at a price so low each plant and local office can have its own. Compact Model 320 Table-Top Offset produces print-like copies of half-tones, line drawings, color work. Work-simplifying features you can't find in any other make of offset duplicator at *any* price. Write for free kit, containing 36 actual samples.

A·B·DICK DUPLICATING PRODUCTS

For more details circle NED-291 G1 on enclosed inquiry slip



PRODUCES ENGINEERING DRAWINGS OR ANY

OFFSET COPIES UP TO 11" x 17"

A. B. Dick Model 360 has a big 10½" x 16½" image area—clicks off professional-quality copies of engineering drawings and other forms too big for ordinary offset equipment. *Aquamatic Control* assures a perfect run, start to finish. Twelve-roller inking system gives complete ink distribution for solid areas, line work, half-tones. Write for complete information.

A·B·DICK DUPLICATING PRODUCTS

For more details circle NED-292 G1 on enclosed inquiry slip

A. B. DICK COMPANY
5700 W. Touhy Ave.
Chicago 48, Illinois—Dept. NED-71

Gentlemen:

Without cost or obligation, please rush me complete information on:

- ☐ The A. B. DICK Model 101 ($99.50) Photocopier
- ☐ The A. B. DICK Model 110 (all-purpose) Photocopier
- ☐ The A. B. DICK Model 114 (wide-sheet) Photocopier
- ☐ The A. B. Dick Azofax Process
- ☐ The A. B. DICK Model 320 Table-Top Offset Duplicator
- ☐ The A. B. DICK Model 360 Large-Image Offset Duplicator

Name & Title _____

Firm _____

Address _____

City _____ Zone _____ State _____

A·B·DICK DUPLICATING PRODUCTS

For more details circle NED-293 G1 on enclosed inquiry slip

NEW HYTROL CONVEYOR NEVER NEEDS GREASING

NEW MODEL A "HANDY BOY" PORTABLE CONVEYOR

First of its kind in the industry!

An entirely new sealed bearing principle is used in the new Hytrol Model A "HANDY BOY" Portable Conveyor. It completely eliminates any need for periodic greasing! All critical moving parts are fully sealed against dirt and moisture. Service life and efficiency go up . . . maintenance time goes way down.

HANDY BOY has a 10" wide belt on a 12" aluminum bed with steel ends and frame. Belt direction is reversible. Available in 9 sizes (4' to 20' lengths.)

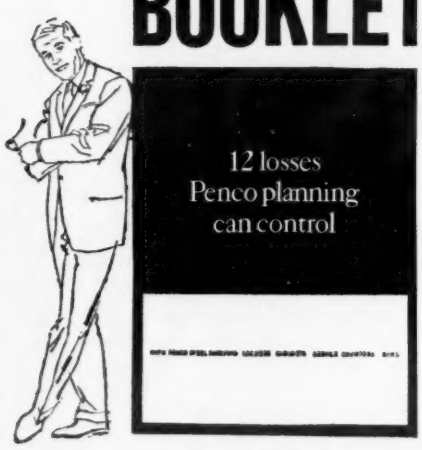
Model A Portable

Write for the FREE HYTROL Full Line Catalog

HYTROL CONVEYOR COMPANY — BELT ROLLER WHEEL — 1965 S. 54th St. • Phone EV 3-5211 MILWAUKEE 19, WISCONSIN

For more details circle NED-294 G1 on enclosed inquiry slip

NEW PENCO BOOKLET



How to control 12 costly plant losses with PENCO-PLANNED shelving, lockers, specialties . . .

- ☐ Waste Space
- ☐ Stealing
- ☐ Poor Inventory Control
- ☐ Slow Order Filling
- ☐ Shipping Bottlenecks
- ☐ Accidents
- ☐ Cleaning Costs
- ☐ Low Employee Morale
- ☐ Production Bottlenecks
- ☐ Excessive Damage
- ☐ High Insurance Costs
- ☐ Excessive Handling Costs

A brand-new, 16-page, illustrated thought-starter that gives proven guidance, informative facts, on how to use Penco storage equipment to reduce common plant losses.

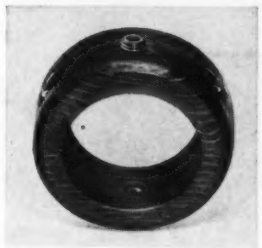
If your company is considering new *shelving, lockers, cabinets, counters,* or *metal storage specialties,* read this Penco Planning Booklet before you buy! Read how to control up to 12 major drains on plant efficiency, profitability.

Request your copy now . . . free on request. Address Dept. F.

ALAN WOOD STEEL COMPANY
PENCO DIVISION
Oaks, Pennsylvania

For more details circle NED-295 G1 on enclosed inquiry slip

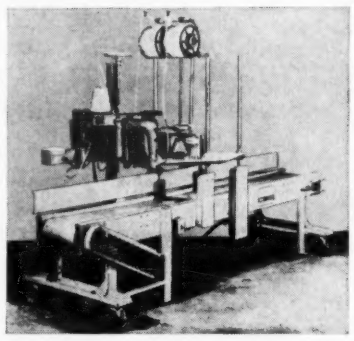
SPLIT LOCKING COLLAR is made of self-lubricating wood



Applicable to any shafting supported by plain journal-type bearings, Pobco self-lubricating wood collar acts as a thrust surface to eliminate metal-to-metal contact. Split feature permits installation in relatively inaccessible areas. Sizes for all standard shafts are available. • **Paramount Oilless Bearing Co.,** 99 Hope Ave., Worcester, Mass.

For more details circle NED-296 G1 on enclosed inquiry slip

AUTOMATIC BAG CLOSER double-tapes and stitches



Employing a Union Special sewing head, this bag closer automatically double-tapes and stitches tight and attractive closures on any bags ranging in size from 10 to 36 in. high at adjustable rates to 25 per minute. Conveyor lengths of 7 to 30 feet lend versatility, and the closer fits into almost any layout for packaging. • **Aeroglide Corp.,** 510 Glenwood Ave., Raleigh, N. C.

For more details circle NED-297 G1 on enclosed inquiry slip

ELECTRIC PAINT HEATER feeds 5 to 25 oz/min at 150-180° F

Intended for use in small finishing departments, this electric paint heater delivers material to a single gun at a preset temperature from 150 to 180° F. The 1500-w explosionproof unit operates on 120-v ac and delivers 5 to 25 fl oz per minute at 110-psi working pressure. It has a blanket-type heating element which warms a thin film of paint as it spirals around 220 sq in. of uniformly heated transfer surface. One thermostat maintains preset temperature during spraying; another maintains a holding temperature of 120° F when material flow and spraying stop. Unit attaches to spray booth or wall and is priced at about $145. • **DeVilbiss Co.,** 300 Phillips Ave., Toledo 1, Ohio.

For more details circle NED-298 G1 on enclosed inquiry slip

the fastest, safest and surest way to . . .

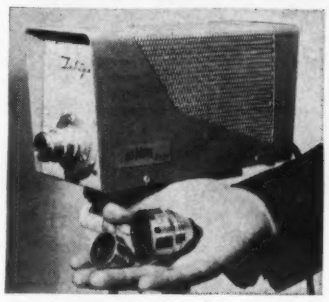
Write for catalog and prices

The Sign of a GOOD Hose Clamp

PUNCH-LOK Company
Dept. A, 321 North Justine St. Chicago 7, Ill.

For more details circle NED-299 G1 on enclosed inquiry slip

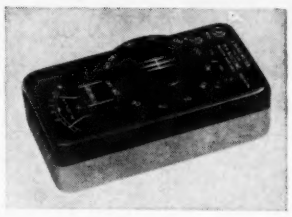
CLOSED-CIRCUIT TV CAMERA for monitoring and communication



Usable with existing television receivers as monitors, Tel-Eye miniature closed-circuit television camera uses mostly transistorized circuitry to provide high definition picture with excellent contrast. Camera is self-contained and only needs to be plugged into an electric outlet and connected to the receiver with a coaxial cable. Model TC-110 has 300-line resolution and Model TC-110V, 400 lines. Price is $550. Optional three-lens turret at $75 provides a focusing mount, a 1-in. fl.9 lens, a telephoto lens, and a wide-angle viewing lens. • **Fairchild Camera & Instrument Corp.,** Allen B. Du Mont Laboratories Div., 750 Bloomfield Ave., Clifton, N. J.

For more details circle NED-300 G1 on enclosed inquiry slip

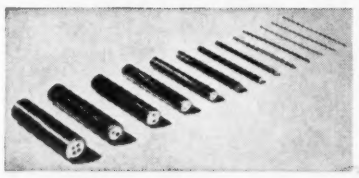
SOUND LEVEL METER is battery-operated portable unit



Weighing only 2 lb and measuring 2 x 3 x 6 in., Model 450 sound meter is powered by a 22.5-v battery with an operating life of 30 hr. Sound level measuring range is from 35 to 142 db, with a 40 to 8000 cps response. This transistorized meter has an aluminum case, a Rochelle salt diaphragm type microphone, and a direct-reading scale. It is suited for measuring the dispersion pattern and level of sound from public address systems as well as for determining noise levels of appliances, office equipment, machinery, air conditioning and ventilating systems, and lighting installations. • **H. H. Scott, Inc.,** Instruments Div., 111 Powdermill Rd., Maynard, Mass.

For more details circle NED-301 G1 on enclosed inquiry slip

THERMOCOUPLE WIRE is ceramic insulated, metal sheathed



Ceramic-insulated, metal-sheath wires are now being made in long lengths to close electrical and physical tolerances. Problems of sheath splits, damaged wires, and insulation voids found in the earlier manufacturing process have been minimized. Special assemblies, such as triaxial and bitriaxial thermocouples, are now possible. • **Aero Research Instrument Co.,** 315 N. Aberdeen St., Chicago 7, Ill.

For more details circle NED-302 G1 on enclosed inquiry slip

NEW decorative patterns

H & K PERFORATED MATERIALS

Just three of H & K's new patterns are illustrated here. Many more contemporary and traditional designs are available in steel sheets for immediate shipment from stock. And there is also a vast selection of additional patterns and open areas which can be custom fabricated from existing dies.

Send for General Catalog 75 and/or Stock List Brochure

FIND NEAREST H & K AGENT in the "Yellow Pages"

Listed Under "Perforated Metals"

THE Harrington & King PERFORATING CO. INC.

Chicago Office and Warehouse • *New York Office and Warehouse*
5658 Fillmore St., Chicago 44 — 114 Liberty St., Dept. NED, New York

For more details circle NED-303 G1 on enclosed inquiry slip

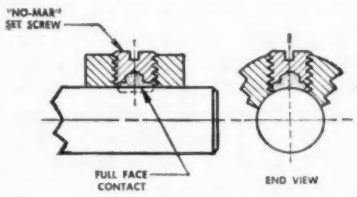
FOOTAGE-IMPRINTED WIRE
available in 13 different sizes

Each spool or coil of Count-O-Cord electrical wire has footage numbers imprinted every 2 ft, starting with 0 and ascending to 250. An accurate means of inventory control and a simple means of measuring a length of wire are advantages. Thirteen sizes from No. 18 two-conductor to No. 10 four-conductor are offered in 250-ft spools and reels. • **Coleman Cable & Wire Co.**, 1900 N. River Rd., River Grove, Ill.

▲ For more details circle **NED-304 G1** on enclosed inquiry slip ▲

NYLON-INSERT SET SCREW
prevents burrs on instrument shafts

Hole drilled in the bottom of No-Mar set screw holds a small cylindrical nylon insert which extends a fraction of an inch. When the screw is tightened, the nylon mushrooms out to form a cushion between screw and shaft, thereby preventing marring of the shaft. It is also forced into the thread of the component to lock the screw. Application is in securing precision instrument gears, couplings, pulleys, cams, hand cranks, and knobs to small diameter shafts, generally with 1/8, 3/16, or 1/4-in. diameters. Easily removed set screw is made of stainless steel in 2-56, 4-40, 6-32, 8-32, 10-24, 10-32, 1/4-20 sizes. Samples are available upon request. • **PIC Design Corp.**, 477 Atlantic Ave., East Rockaway, L. I., N. Y.



▲ For more details circle **NED-305 G1** on enclosed inquiry slip ▲

RF POWER OUTPUT TUBE
has rapid heating cathode

Full benefits of transistorizing mobile equipment can be realized by incorporating rapid heating Harp cathode equipped Amperex tubes as RF power output stages. This cathode delivers full power in 100 milliseconds, making possible equipment transmission instantly from a cold start. Need for warm-up is eliminated. Cathode has low inductance and low hum, and 1.6 v is sufficient for operation. The same low voltage power supply that serves the transistor stages can also operate the harp cathode tube. This cathode is incorporated in the Type 8042 tube; a full line of twin tetrodes will be available soon. • **Amperex Electronic Corp.**, Power Tube Div., 230 Duffy Ave., Hicksville, L. I., N. Y.

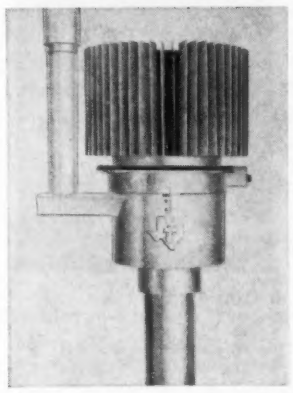
▲ For more details circle **NED-306 G1** on enclosed inquiry slip ▲

OPTICAL MEASURING DEVICE
magnifies to read within 0.0025 in.

Dimensions as small as 0.0025 in. are measured with this Mirroptic Comparator without physically superimposing the reticle on the work. It consists of a 4-oz diecast aluminum frame housing a 45-degree reflective transparent mirror which reflects 50 per cent light. This projects the reticle image on the work, and the user can even mark the work surface while using the comparator. Five-power magnification of the work surface and reticle image is afforded by a two-element astigmatic lens. Custom reticles can be made by the user from blank discs for profile comparison applications. This precision instrument is supplied in a sturdy wooden case and has a list price of $39.50. • **National Tool Co.**, 11222 Madison Ave., Cleveland 2, Ohio.

▲ For more details circle **NED-308 G1** on enclosed inquiry slip ▲

THERMOELECTRIC GENERATOR
8-w unit for industrial use



Available for industrial applications, this 8-w thermoelectric power generator has no moving parts and will operate unattended from natural gas, propane, or butane. Its operation is unaffected by exposure to weather, and the burner is free from wind blowout. Generators can also be modified to use any combustible fuel, waste heat, steam, or solar heat. • **Texas Instruments Inc.**, Apparatus Div., Industrial Products Group, Box 6027, Houston 6, Tex.

▲ For more details circle **NED-309 G1** on enclosed inquiry slip ▲

FILTER CARTRIDGES
remove dirt and rust from water

Five different porosities from −1 to +3 are available in these replacement filters which fit the No. 9 water filter. This unit removes dirt, rust, sand, silt, and other

sediment from water. Cartridge is easily replaced without tools. • **Calgon Co.**, Hagan Center, Pittsburgh 30, Pa.

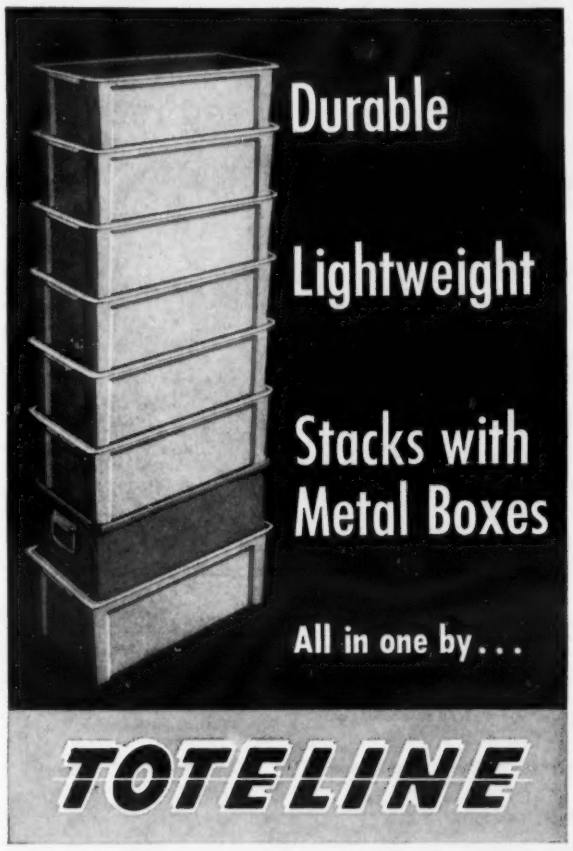
▲ For more details circle **NED-310 G1** on enclosed inquiry slip ▲

A valuable machine, to you, for the speedy, safe, efficient disposition of blueprints, letters, confidential records. The M & M Air Fluff Paper Shredder is also a money saver to those companies that use quantities of paper excelsior—by converting waste paper into valuable excelsior. Adjustable cuts of 1/8", 3/16", 1/4", or 3/8" widths. Models range in productive capacities from 200 to 2500 pounds per hour. Write for descriptive folder.

MITTS & MERRILL

1000 SO. WATER ST. • SAGINAW, MICHIGAN

▲ For more details circle **NED-311 G1** on enclosed inquiry slip ▲



Now . . . a sturdy tote box of strong-as-steel molded fiber glass which stacks interchangeably with your present metal boxes of the popular 10 by 20 by 8-inch size.

You can benefit from the advantages of durable molded fiber glass immediately by introducing Toteline Model 538-1 into your present system. Then replace metal boxes with Toteline boxes as the metal boxes need replacement.

Toteline boxes last indefinitely without maintenance. They can't rust or leak . . . you can't dent them and they never need straightening. There are no sharp edges . . . just smoothly rounded corners.

Molded handles are a part of the integral, one-piece stacking lip. Steel wire, concealed within the edges of the box, adds strength and rigidity.

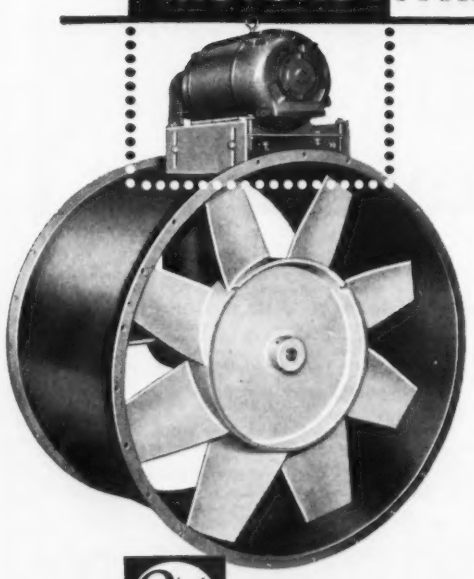
Also available are Toteline fabricated boxes made to your exact specifications in large or small quantities. These custom made boxes have panels of molded fiber glass, up to 3/16 inch thick. Top and bottom frames and corner angles are of strong galvanized steel or aluminum. Casters, hand holes, runners, lids, compartments . . . you name it, we'll make it.

MOLDED FIBER GLASS TRAY CO.
LINESVILLE, PA.

ONE OF THE MOLDED FIBER GLASS COMPANIES

▲ For more details circle **NED-312 G1** on enclosed inquiry slip ▲

CHANGE MOTORS . . . ANYTIME TO STEP UP CAPACITY!



BELT-DRIVEN AXIAL FANS

PROPELLAIR Type BT Fans, sizes through 60", have universal mounting plates which accommodate motors to 30 HP. All bearing assemblies are sized for 50 HP loads. BT Fans can easily be field-modified to boost or decrease capacity, regardless of original rating, simply by changing the motor and V-belt drive. Use BT Fans for low-cost general duty, for handling corrosive or explosive fumes, extreme heat or high humidity. Straight-line design permits easy, inexpensive installation. A wide range of propeller designs permits selection for maximum efficiency at the operating range involved. Fans bear AMCA Certified Ratings to 84,000 cfm, free air. Write today for Bulletin 625NE.

PROPELLAIR, Div. of Robbins & Myers, Inc., Springfield, Ohio.

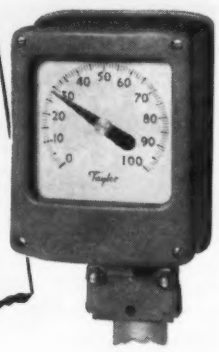
DIRECT CONNECTED SKY BLAST® CENTRIFUGAL

PROPELLAIR®

CERTIFIED RATINGS AMCA

▲ For more details circle **NED-307 G1** on enclosed inquiry slip ▲

MEMO
Taylor 210T Transmitter
✓EASY READING
✓HIGH QUALITY
✓LOW COST



Designed for Gage Pressure, Volumetric Pressure, Volumetric Load and Temperature, the Taylor 210T TRANSCOPE* Transmitter is only 7" x 9" x 4", yet you can read the 11¾" scale up to 35 ft. away.

Accuracy of transmitted signal is within ½% of the input signal. Indication within ± 1% of actual value. Threshold sensitivity 0.1% of input span.

Low in cost but high in quality, this motion-balance, pneumatic transmitter is exceptionally easy to adjust and maintain. Weatherproof case is split diagonally for easy access. Single package pneumatics, encapsulated movements and actuating element are easily removed for service. It can be wall or pipe mounted.

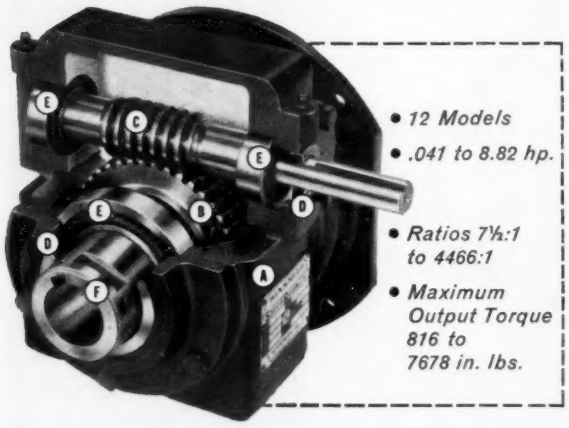
Ask your Taylor Field Engineer, or write for **Bulletin 98385.** *Taylor Instrument Companies, Rochester, N. Y., or Toronto, Ontario.*

*Trade Mark

Taylor Instruments MEAN ACCURACY FIRST

▲ For more details circle NED-313 G1 on enclosed inquiry slip ▲

Winsmith HOLLOW SHAFT worm gear speed reducers



A. Cast Iron Housing—for high heat radiation, maximum strength and rigidity.

B. Special Bronze Worm Gears—for high strength and cooler, more efficient operation.

C. Case Hardened Steel Worms—cut integral with the shaft. Meet AGMA long-wear specifications.

D. Positive Oil Seals—keep oil in, dirt out. Shafts lapped for longer seal life.

E. Tapered Roller Bearings—for minimum maintenance, long bearing life, permanent shaft alignment.

F. Hollow Slow Speed Shafts—in wide range of standard bore sizes. Mounts on shaft of driven machine *without bushings.*

Winsmith Hollow Shaft Speed Reducers cover a broad range of power transmission requirements for both single and double reduction drives. They are available in both torque arm and flange mounted models and *their worm gearing permits much higher reduction ratios than are possible with other types of gearing, in comparable size units.* Winsmith Hollow Shaft models are designed for all applications where it is advantageous to mount the reducer on the shaft of the driven machine. They are compact, easy to install and require less space than conventional units. Their design and construction provide a high degree of standardization which eliminates excessive special application engineering.

WRITE TODAY for complete information or call your nearest Winsmith Representative listed in the Yellow Pages. For both standard and special power transmission applications, you'll find it pays to standardize on Winsmith.

WINSMITH SPEED REDUCERS ®

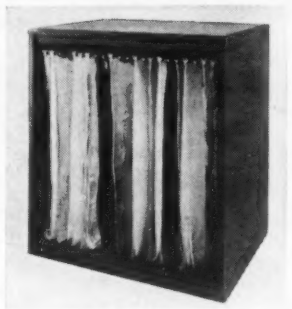
MEMBER OF AGMA

WINSMITH, INC.
216 Eaton St., Springville, (Erie County), N. Y.

• Winsmith Speed Reducers are made by American craftsmen to meet American design and production standards.

▲ For more details circle NED-314 G1 on enclosed inquiry slip ▲

DRAWING FILE CABINET
holds prints up to 24 x 36 in.



Each of the 22 binders accommodated by the Model OC-2224 Stikfile holds from 1 to 75 engineering drawings, blueprints, or maps. Total capacity is 1650 prints in sizes up to 24 x 36 in. The open type steel filing cabinet measures 26 x 36 x 42 in. and is available in gray, brown, beige, green, or mist green colors. Top mounted traverse tracks enable the binders to slide in and out. A label strip extends across the front of the cabinet, top of which provides space for reference and work. • **Dancer Stikfile Co.,** Box 10221, Houston 18, Tex.

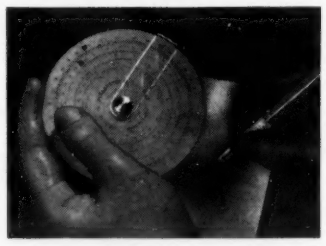
▲ For more details circle NED-315 G1 on enclosed inquiry slip ▲

ALUMINUM JACK
lifting capacity is 15 tons

Weighing only 36 lb, the Model 717-BA track jack has an aluminum alloy housing, heat treated high carbon steel socket lever, and heat treated alloy steel pawls and support bushings. It has a lifting capacity of 15 tons and a rise of 7½ in. A foot lift height of 2 in. and a height of 14 in. enable it to be used for both high and low operations. Base is 6½ x 10¼ in. • **Duff-Norton Co.,** 4 Gateway Center, Pittsburgh 22, Pa.

▲ For more details circle NED-316 G1 on enclosed inquiry slip ▲

CIRCULAR SLIDE RULE
designed for one-hand operation

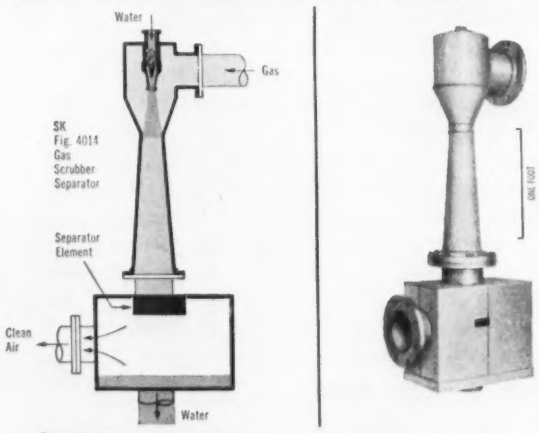


By using the same moving scale principle as straight slide rules, Acudial circular slide rule is easy to operate. Revolving disc design minimizes the number of settings required and retains the endless scale concept, at the same time eliminating resetting required by running off the scale. Compact rule is used with one hand, leaving the other free for writing. Six types have various scales and arrangements suited to specific types of work. All markings are engraved. Prices range from $1.75 to $5.50. • **Fullerton Engineering Sales Co.,** 4623 York Blvd., Los Angeles 41, Calif.

▲ For more details circle NED-317 G1 on enclosed inquiry slip ▲

SK Introduces New
GAS SCRUBBER-SEPARATOR

New "packaged" unit offers never-before-obtainable efficiency. Combines SK ejector-venturi scrubber with new separator which reduces liquid carryover to 0.00002 gal. per 100 cfm. Unit, called "Fig. 4014" is low cost, compact. Stocked in popular sizes for immediate shipment.

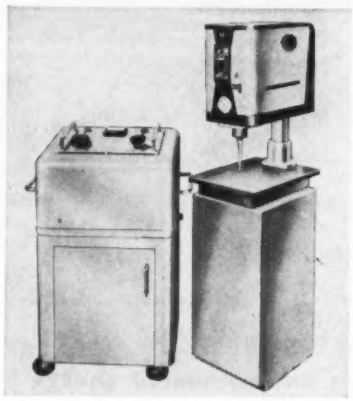


For details—ask for Bulletin Supplement 4R.

Schutte and Koerting COMPANY
2227 STATE ROAD, CORNWELLS HEIGHTS, BUCKS COUNTY, PA.
Phone: MErcury 9-0900 TWX: Cornwells, Pa., 69-"U"
JET APPARATUS • ROTAMETERS • GEAR PUMPS • VALVES • HEAT EXCHANGERS

▲ For more details circle NED-318 G1 on enclosed inquiry slip ▲

ULTRASONIC PLASTICS SEALER
seals all heat-sealable materials without heat, even if oil coated



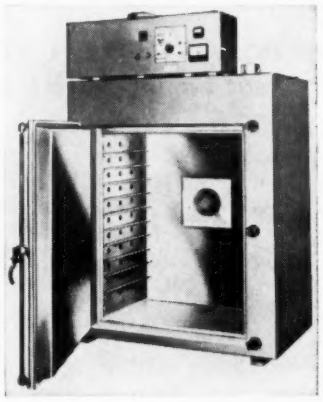
Mylar, nylon, vinyl, polyethylene, polypropylene coated papers, synthetic fabrics, and other thermoplastic materials are sealed or welded without heat by the Zephyr 300 ultrasonic sealer. It seals all film thicknesses from ¼ to 40 mils at speeds up to 600 linear inches per minute, even through such contaminants as oils, food, chemicals, and coatings.

Equipment consists of a 20-kc, 300-w power console which feeds into a magnetostrictive type transducer welding head. Ultrasonic vibrations set up on the cone-shaped tool tip compress the overlapped plastic films at such a high vibratory rate that heat is generated internally in the plastic until fusion takes place. Outer surfaces of plastic remain relatively cold, and molecularly oriented films do not fully lose their characteristics at the weld area.

An accessory to be available soon will permit bonding of very fine thin films at high speed. • **Ultra Sonic Seal, Inc.,** 76 Madison Ave., New York 16, N. Y.

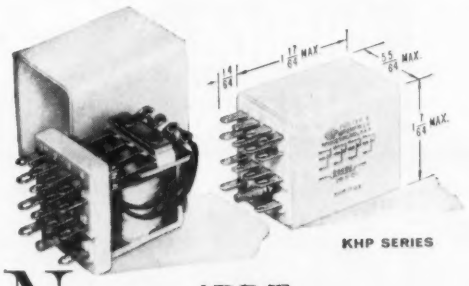
▲ For more details circle NED-319 G1 on enclosed inquiry slip ▲

BATCH OVENS
four sizes from 16 to 36 cu ft



Temperature ranges up to 400° F and 600° F are available in Power-O-Matic 60 industrial batch ovens, equipped with saturable reactor control and range-lock protection. They afford infinitely proportional, stable, straight line control of temperature without cycling action. Four sizes from 16 to 36 cu ft are used for time-test procedures, aging, curing, drying, tempering, coil and armature baking, preheating plastics, core baking, and transformer testing. All models include Fiberglas insulated triple-side walls, steel housing and doors, black heat controlled low watt density elements, ball bearing motor, and turbo blower. • **Blue M Electric Co.,** 138th & Chatham Street, Blue Island, Ill.

▲ For more details circle NED-320 G1 on enclosed inquiry slip ▲



New 4PDT 3 AMP P&B relay

MECHANICAL LIFE EXCEEDS 100 MILLION CYCLES

This small (about a 1" cube) 4-pole relay not only maintains operating tolerances over an exceptionally long life—but is easy to install, using the conveniently spaced solder lugs or a socket.

Its 4PDT contacts will switch loads from dry circuit up to 3 amperes. Order samples today.

KHP SERIES SPECIFICATIONS

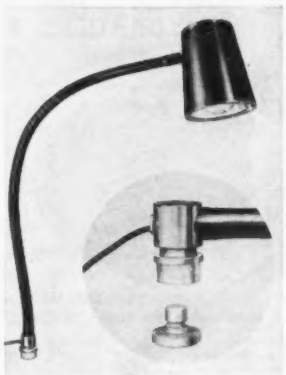
CONTACTS:
Arrangement: 4 Form C, 2 Form Z.
Material: 1/32" dia. Silver standard.
Rating: 3 amps @ 30 volts DC or 115 volts AC resistive for 100,000 operations.
INSULATION RESISTANCE: 1500 megohms min.
COILS:
Resistance: 11,000 ohms max.
Temperature: Operating Ambient: −45°C. to +70°C.
Power: 0.5 watts min. operate @ 25°C. 0.9 watts nom. @ 25°C. 2.0 watts max. @ 25°C.
MECH. LIFE: In excess of 100 million cycles.
DUST COVER: Standard.
TERMINALS: Solder lug and taper tab.
SOCKET: Solder lug or printed circuit terminals. Available as accessory.

KHP SERIES RELAY NOW AVAILABLE AT YOUR LOCAL ELECTRONIC PARTS DISTRIBUTOR

POTTER & BRUMFIELD
DIVISION OF AMERICAN MACHINE & FOUNDRY COMPANY • PRINCETON, INDIANA
IN CANADA: POTTER & BRUMFIELD, DIVISION OF AMF CANADA LIMITED, GUELPH, ONT.

▲ For more details circle NED-321 G1 on enclosed inquiry slip ▲

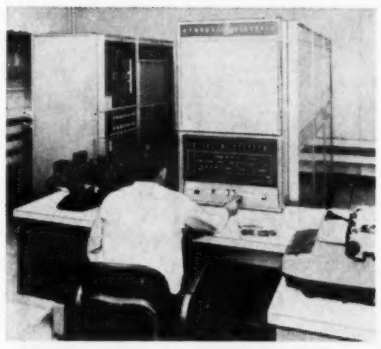
FLEXIBLE-ARM LAMP
mounts easily on bench, table, wall



Featuring a "snap-on button" mounting bracket, this Multi-Lamp portable flexible-arm lamp is quickly snapped onto or off of as many buttons as desired. It can thus be moved from bench to table, desk to wall, or wherever needed. Readily adjusted to any position, it has a durable plastic - covered flexible arm and an air-cooled impact-resistant lamp head. The spun aluminum reflector will accept up to 100-w lamps for glare-free illumination of work. Standard finish is black. It has a right-angle or straight base and neck length of 12 to 24 in. Other colors, a felt-bottom desk lamp base, and a C-clamp with two buttons are optional. • **Moffatt Products, Inc.**, 3124 N. Washington, Minneapolis 11, Minn.

▲ For more details circle **NED-322 G1** on enclosed inquiry slip ▲

INFORMATION RETRIEVAL SERVICE
uses GE computer to search 84,500 technical metalworking abstracts



High speed information retrieval service on metalworking is now being offered by Western Reserve University's School of Library Science in co-operation with The American Society for Metals. System employs a General Electric GE-225 transistorized, general purpose computer with an 8192-word magnetic core storage memory and special programming features for conducting literature searches.

Computer can search through indexed abstracts of technical articles, patents, and government reports at the speed of 100,000 per hour. Current files total 84,500 documents which are stored on magnetic tape. Number of abstracts processed through 1960 totaled 48,500, with another 36,000 projected for 1961. Service has 157 subscribers to date. Price for biweekly searches is $50 per month.

System is equipped with dual magnetic tape handler and controller, a high-speed punched card input, and an electric typewriter output. • **Western Reserve University**, School of Library Science, Center for Documentation & Communication Research, Cleveland 6, Ohio.

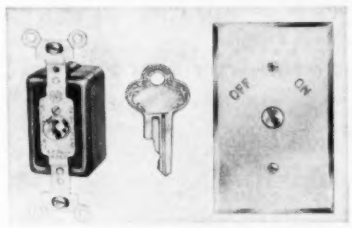
▲ For more details circle **NED-323 G1** on enclosed inquiry slip ▲

HIGH TENSILE CAP SCREWS
have corrosion resistant finish

Diameters up to 3½ in. and lengths up to 30 in. are available in Supertanium extra heavy duty high tensile strength cap screws. Diameters begin at 9/16 in. and lengths at 6 in. Average minimum tensile strength is 160,000 psi, compared with 65,000 psi or less for ordinary cap screws. They can be tightened under maximum pressures without weakening or stretching. A corrosion resistant finish permits easy removal. • **Premier Industrial Corp.**, 4415 Euclid Ave., Cleveland 3, Ohio.

▲ For more details circle **NED-325 G1** on enclosed inquiry slip ▲

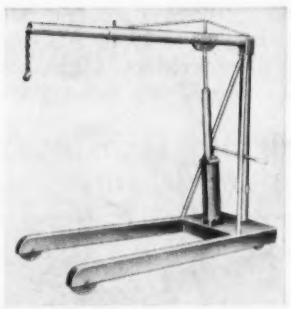
QUIET LOCK SWITCH
in single, double, or 3-way types



Unauthorized control of an electrical circuit is prevented by this locking model Quiette switch. It can be operated only by turning the proper key in a P. & F. Corbin pin tumbler lock. It is available in 15 or 20-amp ratings for 120-277-v ac circuits in single-pole, double-pole, and three-way types. Indicating or nonindicating brushed brass flush plates are offered. Weatherproofing is optional. • **Arrow-Hart & Hegeman Electric Co.**, 103 Hawthorn St., Hartford 6, Conn.

▲ For more details circle **NED-326 G1** on enclosed inquiry slip ▲

MOBILE SHOP CRANE
2-ton model added to line



Addition of this 2-ton model to the Ausco line of mobile shop cranes affords a choice of four capacities, including ½, ¾, and 1-ton units. All of these hydraulically powered cranes have adjustable telescoping booms standard with chain and hook, large front wheels, and ball bearing rear casters. Pump handle is located at waist height. Truck-mounted ½ and 1-ton cranes for manual-hydraulic or electric-hydraulic operation are also available. • **Auto Specialties Mfg. Co.**, St. Joseph, Mich.

▲ For more details circle **NED-327 G1** on enclosed inquiry slip ▲

TRICKY BENDS ARE NO TRICK

With Pedrick Production Benders any bend is an easy bend—fast and economical, too! Pipe, tubing, bus bar or structural metal—*bend with Pedrick.*
PEDRICK TOOL AND MACHINE CO.
3640 N. Lawrence St., Phila. 40, Pa., Dept. 6.

BEND WITH PEDRICK

▲ For more details circle **NED-329 G1** on enclosed inquiry slip ▲

More than 10,000 in use:

For quick, precise measuring of nonmagnetic thicknesses

Elcometer Thickness Gauge measures thickness of porcelain enamel, paints, platings, foils, glass, paper, plastics and other nonmagnetic coatings—*with a guaranteed ± 5% ± .0001" accuracy.* Handy pocket-size, it gauges flat or curved surfaces and hard-to-get-at spots easily. Needle-locking button assures correct reading every time. Now available in *fifteen* double-scale models, with contact spheres, "V" block, or flat bases.

Complete with tough leather case, inner pocket for test strips, and carrying harness. Weighs only 6 oz.

ONLY $83.75 F.O.B. CLEVELAND

Write for free Illustrated Folder
FERRO CORPORATION
4150 East 56th St., Cleveland 5, Ohio

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ASSEMBLE... CHANGE SHELVES
with no tools

REPUBLIC CLIP SHELVING is easy to assemble. Put it up in minutes... no tools required with new shelf clip.

It's flexible, too... can be quickly modified to meet changing shelving needs. Wide variety of types and sizes. Call your Republic representative, or write:

REPUBLIC STEEL
BERGER DIVISION
1034 Belden Ave. · Canton 5, Ohio

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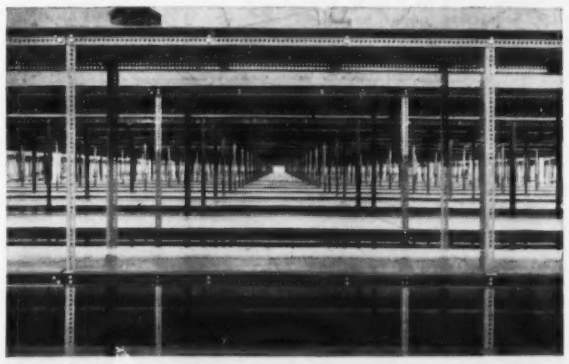
REPUBLIC "KNOW-HOW" SOLVES YOUR FABRICATION PROBLEMS

Contract manufacturing is a full-time operation at Republic's Berger Division. Engineers work with you in developing your product, in solving manufacturing, assembly, delivery problems. Well-rounded stock of tools, dies, complete machine shop. Modern production lines for shearing, punching, forming, painting. Call, or write today.

REPUBLIC STEEL
BERGER DIVISION
1034 Belden Ave. · Canton 5, Ohio

▲ For more details circle **NED-328 G1** on enclosed inquiry slip ▲



BUILD IT with Republic METAL LUMBER

Versatile as its name implies, Republic Metal Lumber®—the strong, easy-to-use framing material of 1,000 uses.

Simply measure, cut, assemble... for racks, benches, ladders, shelving. Delivered in bundles of 10 pieces, 10- or 12-foot lengths. Send for idea catalog, or call your Republic representative.

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BERGER DIVISION
1034 Belden Ave. · Canton 5, Ohio

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NEW SPEED CONTROL VALVE

1/8" and 1/4" pipe sizes in stock now!

Now a speed control valve that regulates your cylinder movement with precision and sureness, but which lists at $3.00 and $3.25. And despite its lower costs, "CUB" features the same high quality of design and workmanship you've come to expect from Ross. "CUB'S" design stresses trouble-free operation and easy maintenance. CUB is small, aluminum and lightweight. If you use speed controls, by all means call your Ross representative or write us.

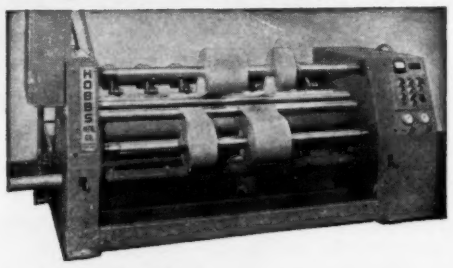
ROSS OPERATING VALVE CO.
161 E. Golden Gate Ave. • Detroit 3, Michigan

▲ For more details circle NED-332 G1 on enclosed inquiry slip ▲

HOBBS *Slitter Line*

SIZES — 30" to 72"

precisely fits every need



72" SLITTER & REWINDER
Engineered by us for specific needs of a major foil company, processing PVC film.

MEDIUM SIZE SLITTER & REWINDER
Engineered by us for a major paper converter, processing paper to be slit and rewound to varying widths and diameters.

30" SLITTER & REWINDER
Moderately priced and engineered by us to meet the specific needs of converters for processing films and papers.

Tell us your slitting-rewinding needs

Our basic Hobbs Line includes slitters from 30" to 72", with speeds 200' to 1,000' per minute—at prices from $2,500 to $25,000—to slit various materials from PVC film to paper. To meet your needs, we engineer your Hobbs Slitter Rewinder installation so that "the equipment grows out of the job"—doing your work as specified.

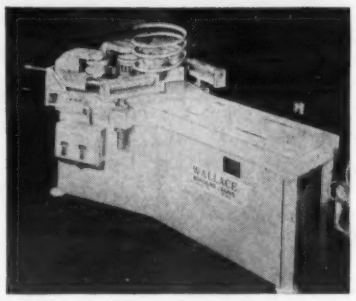
Slitter bulletin on request.

HOBBS EST. 1883
Winders • Hand & Power Shears
Slitters • Die Presses
Automatic Cutters
Manufacturing Company
41G Salisbury St., Worcester 5, Mass.
Direct Sales Offices in Irvington, N. J., Columbus, O., Chicago, Ill. and Los Angeles, California
Representatives in Greenville, S. C. and Toronto, Ont., Canada

144-9

▲ For more details circle NED-333 G1 on enclosed inquiry slip ▲

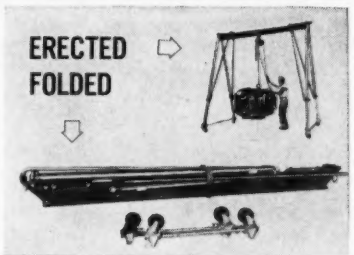
ROLL BENDING MACHINE
handles pipe, tube, or bar stock



First in the 460 Series of roll bending machines is this Model 462 which has a 2-in. pipe capacity and will handle all kinds of pipe, tube, or round, square or flat bar stock. It rolls stock into tight or loose coils, flat spiral coils, or into wide or short radius bends. One set of pipe rolls per pipe size is equivalent to many sets of fixed radius dies. Machine has minimum radius adjustment of 9 in., handles 1½-in. round bars, and is powered by a 3-hp motor. The 7½-hp Model 464 and 15-hp Model 466 will handle 4 and 6-in. pipe and 3 and 4-in. round bar stock, respectively. Minimum radius adjustments for the larger machines are 18 and 36 in. • **Wallace Supplies Mfg. Co.,** 1304 W. Diversey Parkway, Chicago 14, Ill.

▲ For more details circle NED-334 G1 on enclosed inquiry slip ▲

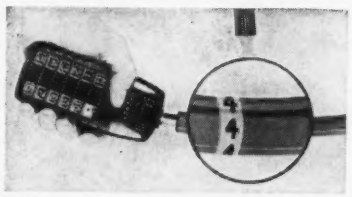
ADJUSTABLE GANTRY
folds for out-of-the-way storage



When disassembled, there are only three sections to the Magic-Pole universal gantry, and no small loose parts. It is quickly dismantled for out-of-the-way storage by removing its caster frames, closing its telescoping legs, and folding them against the I-beam. Gantry may also be made low and narrow for rolling through fire doors, into elevators, and through narrow aisles. The telescoping legs adjust separately for use on different levels. A self-leveling I-beam is provided for off-center loads. Five models have steel or aluminum alloy I-beams in spans to 30 ft, heights to 17 ft, and capacities to 4 tons. • **B. E. Wallace Products Corp.,** Exton 19, Pa.

▲ For more details circle NED-335 G1 on enclosed inquiry slip ▲

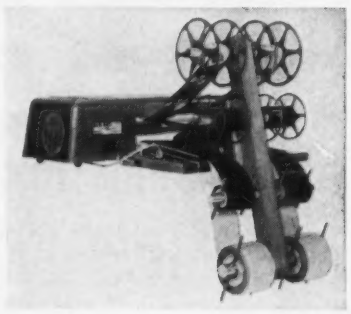
CIRCUIT MARKING TABS
for identifying up to 50 circuits



Numbered from 1 to 10 and printed on a colored, adhesive backed cloth tape, Trace-Tab circuit markers are easily used in conjunction with an Amprobe cable tracer or similar instrument to trace and identify circuits. Tabs are affixed to a cardboard stiffener, and each is subdivided in half for wrapping around both ends of a conductor. The tabs are sold in packages of ten cards—two each of five contrasting colors for $2, making possible marking of 50 circuits. • **Pyramid Instrument Corp.,** 630 Merrick Rd., Lynbrook, L. I., N. Y.

▲ For more details circle NED-336 G1 on enclosed inquiry slip ▲

ROLL-PROOFING ATTACHMENT
for diazo rotary whiteprinters



This Milli-Proofer 79 roll-proofing attachment, designed for use with the Blu-Ray Proof Printer and other diazo rotary whiteprinters, will proof two 500-ft rolls of 70 or 90-mm red proof paper simultaneously. Operation requires no attention after setup. Attachment is placed in front of the whiteprinter, and rolls of film and proof paper are drawn into the printer from the lower spools. The proofed paper and the film are returned from the printer and automatically separated onto self-compensating take-up spools. Attachment costs $110. • **Reproduction Engineering Corp.,** 97 Plains Rd., Essex, Conn.

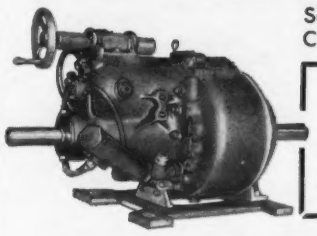
▲ For more details circle NED-337 G1 on enclosed inquiry slip ▲

→ SURPLUS! GOV'T. COST $3397.00 ←

10 HP. VARIABLE SPEED

0-to-1600 RPM

HYDRAULIC TRANSMISSION



Suitable for any 2 to 10 HP Continuous Duty Application

Save Thousands of $$$$
Only **$299** fob
Stock #ZSU-10 **Fully Guaranteed**

Modernize your existing machinery . . . here's low cost automation for HIGH-TORQUE, HEAVY DUTY applications as:

- mixers
- conveyors
- pumps
- elevators
- machine tool drives
- sawmill machinery
- paper machines
- construction machines
- lift and hoists
- spring coilers
- textile machines
- printing presses

Variable speed increases production and saves you money!

Drive at 1800 RPM or less with any 2 to 10 HP motor or 20 HP gas engine for variable speed from 0 to 1600 RPM. Continuous Duty! Precise speed selection is obtained by rotation of hand wheel giving infinite number of speeds. Speed is smooth and constant. Neutral off position. Controls easily altered for remote control. Ball and Roller bearings throughout. Extremely compact and light: 100 lbs., size 22" L (excl. shafts). 13" W, 16" H. Input shaft 1-⅝" dia., 4" L. Output shaft 1-⅝" dia., 4" L. The precision and skill that went into the manufacture of this unit are beyond compare. Complete instruction and service manual.

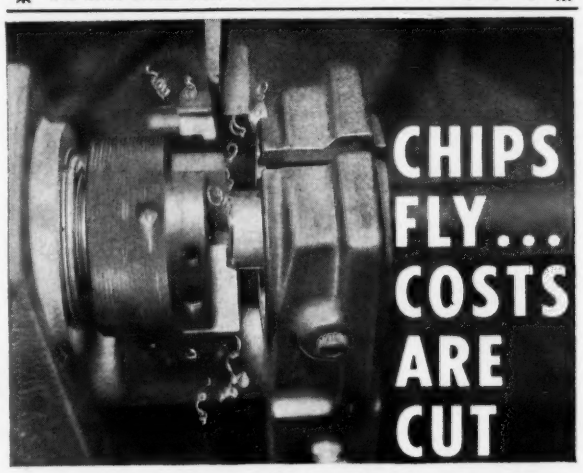
ORDER DIRECT FROM THIS AD

We will accept your purchase order "subject to return" if unsuitable in any way—for full credit or refund of purchase price!

Supply Limited! Don't Wait Phone TAylor 9-1365

ROBERTS ELECTRIC CO. Dept. ND-165
849 W. Grand Avenue Chicago 22, Ill.

▲ For more details circle NED-338 G1 on enclosed inquiry slip ▲



Low Investment Model 660 Speeds Deburring, Chamfering, Facing on Tube, Pipe, Rod Ends.

- **HIGH PRODUCTION, CLOSE TOLERANCES** . . . up to 800 ends an hour . . . with air operated models up to 1500 ends an hour.
- **SIMULTANEOUS OPERATIONS** . . . inside-outside deburring, chamfering, facing.
- **EASY TO OPERATE** . . . with simplified controls.
- **INEXPENSIVE INTERCHANGEABLE TOOLING** . . . fast, 3-minute setups.
- **CAPACITIES TO 2" O.D.** . . . larger models up to 5" O.D.

Write today for FREE CATALOG

PINES ENGINEERING CO., INC.
Specialists in Tube Fabricating Machinery 641 WALNUT • AURORA, ILLINOIS

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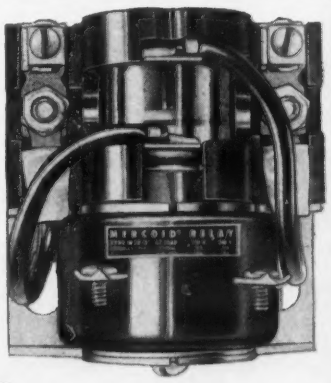


35 AMP

Plunger Type

MERCURY RELAY

If you need reliability and durability, this quality built relay by Mercoid is your answer.
For heavy duty loads, such as resistance heating, (domestic, commercial, industrial)—heat treating furnaces, drying equipment, welding, lighting, illuminated signs, score boards.
Hermetically sealed mercury to mercury contact provides visible on-off operation. Silent and chatterless. Quickly mounted, easily wired. Speeds up to 100 operations per minute.

CONTACT RATING

LOAD

	AC	DC
120V.	30A.	15A.
240V.	20A.	10A.
440V.	8A.	—

***NON INDUCTIVE HEATER LOADS**

AC ONLY

120V.	35A.
240V.	25A.
440V.	10A.

Write For Bulletin 0-20

THE MERCOID CORPORATION
4211 Belmont Ave., Chicago 41, Ill.

▲ For more details circle NED-340 G1 on enclosed inquiry slip ▲

EPOXY RESIN COATING

stops sticking in bins and hoppers!

Now available from Frederic B. Stevens, Inc.—a low-cost Epoxy Resin Bin Coating that prevents sticking in bins, speeds up flow of sands, compounds, plastics and granular materials from hoppers and chutes.

Easy to apply by brush, roller or spray, the coating hardens to a smooth, glass-like finish that resists abrasion and withstands high impact. Coverage depends on degree of surface roughness. One gallon normally covers 400 to 500 sq. ft. of relatively smooth surface. Order your Epoxy Resin Bin Coating from Stevens today!

1 gal. Epoxy Coating, 1 gal. Curing Agent: $23.60. 5 gal. Epoxy Coating, 5 gal. Curing Agent: $104.40.

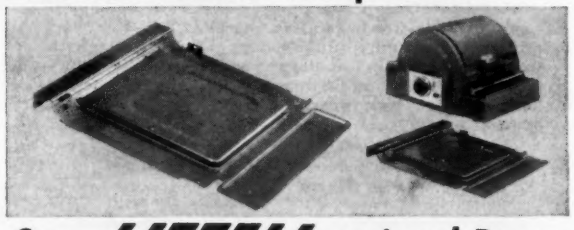
(F.O.B. Detroit, Mich.)

frederic b. STEVENS, inc.
DETROIT 16, MICHIGAN

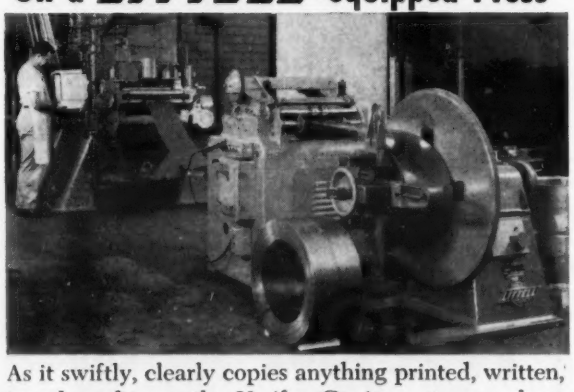
For more details circle NED-341 G1 on enclosed inquiry slip

Eastman Kodak Verifax Copier

Gets Its Precision Stamped Base



On a LITTELL-equipped Press



As it swiftly, clearly copies anything printed, written, typed or drawn, the Verifax Copier rests on a base that is much more than a firm support. The base also secures and protects the heater element, the power cord, the wire assemblies, fuse, and thermostat assembly that are vital to high speed copying. To produce this Heater Base with precision and minimum waste, Eastman stamps it from coil stock that is Littell-handled all the way to the press die. Making up this all-Littell line are a No. 40-18 Reel, No. 418 Straightener and No. 6-18½ Roll Feed.

COILY Says . . .

"The punch press you use can be brought to its peak in accurate, high speed, low cost stamping when a LITTELL line serves it."

Write for these LITTELL Catalogs

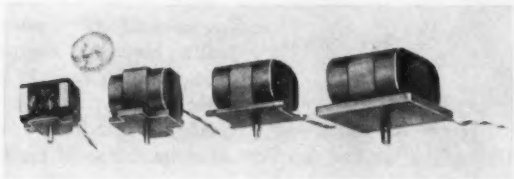
REELS . . . "D" Bulletins
STRAIGHTENERS . . . "C" Bulletins
ROLL FEEDS . . . "A" and "B" Bulletins

F. J. LITTELL MACHINE CO.
4169 N. RAVENSWOOD AVENUE, CHICAGO 13, ILL.

For more details circle NED-342 G1 on enclosed inquiry slip

DRY-COIL TORQUE MOTORS
output forces of 2.5 to 13 lb-in.

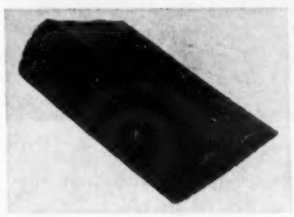
Working fluid in line of dry-coil torque motors is completely sealed from the motor's magnetic air gaps, eliminating possible magnetic particle contamination and



resulting performance degradation. Used up to now in missile applications, motors can withstand up to 6000-psi working pressure between working fluid and torque motor proper. Four models, 121 through 124, range in output force from 2.5 to 13 lb-in. with strokes ranging from 0.005 to 0.015 in. To further protect magnetic air gaps of the motor, the gaps are sealed with a nonmagnetic material to eliminate malfunction due to airborne magnetic particles. • **American Measurement & Control, Inc.**, 240 Calvary St., Waltham 54, Mass.

For more details circle NED-343 G1 on enclosed inquiry slip

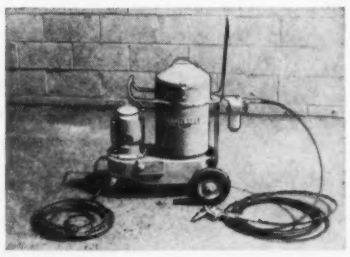
SAFETY RUBBER WEDGE
prevents rolling of heavy objects



Resilient top surface that cushions itself to the curve of a roll or cylinder and a ribbed tread that gives a nonskid grip on the floor are features of this safety wedge. Made of heavy rubber, it prevents accidental rolling of heavy objects. It is 2½ in. high and has a tread width of 6½ in. Standard lengths are 4, 6, and 12 in., with continuous lengths up to 10 ft optional. Uses include holding rolls of paper, bars, drums, pipes, and cylinders on a bench, floor, truck, or dolly. Price is $3.30 for the 12-in. length. • **John G. Shelley Co.**, 16 Mica Lane, Wellesley Hills 81, Mass.

For more details circle NED-344 G1 on enclosed inquiry slip

AIRLESS PAINT SPRAYER
is portable 110-v outfit



Easily used in plants or on the job, this Model E-HY electric airless paint spray outfit is driven by an explosionproof universal ⅜-hp 115-v motor. It is suited for applying all types of paints and finishes and has a 5-gallon paint container with a built-in agitator. Instant fluid pressure is provided at the gun when the motor starts. Fluid pressure of 1500 to 2000 psi assures atomization with minimum of overspray or bounce-back. Standard equipment includes 25-ft electric cord and 25 ft of ¼-in. nylon plastic covered hose. Two rubber tired wheels and a swivel caster afford mobility. • **S & S Engineering Co.**, Box 158, Northville, Mich.

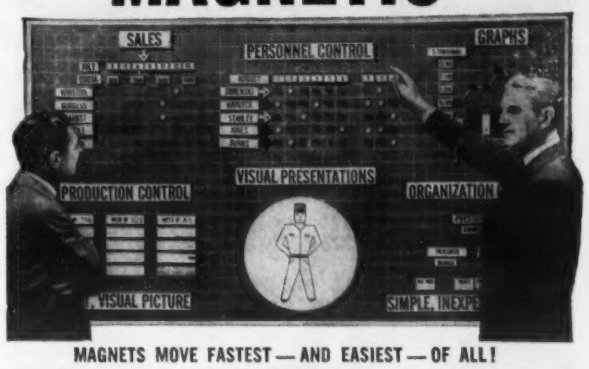
For more details circle NED-345 G1 on enclosed inquiry slip

SOLID-STATE RECTIFIERS
12-amp diffused-junction silicon type

Latest RCA semiconductor is a family of 12-amp diffused-junction silicon rectifiers with important use in industrial power supplies, missile electronic systems, machine-tool controls, and other industrial equipment. All units are hermetically sealed in a JEDEC DO-4 package and meet requirements of MIL-E/1/1108. Improvements over prototype versions include higher peak surge currents (to 240 amp), ability to handle transient inverse voltages from 50 to 200 v above PIV rating, and maximum operating and storage temperature of 200° C. PIV ratings range from 50 to 600 in seven types. The stud-mounted units are also available in reverse polarity versions. Thermal impedance is 2° C per watt maximum. • **Radio Corp. of America**, RCA Semiconductor & Materials Div., Somerville, N. J.

For more details circle NED-346 G1 on enclosed inquiry slip

VISUAL MAGNETIC CONTROL



MAGNETS MOVE FASTEST — AND EASIEST — OF ALL!

SIMPLEST VISUAL SYSTEM FOR
- Production
- Personnel
- Sales
- Maintenance
- Scheduling
- Machine Loading
- Charts—Graphs
- Visual Presentations

COLORFUL MAGNETIC ELEMENTS
- show facts instantly
- organize for action
- eliminate mistakes
- get the job done

PRICED FROM $38 INCLUDING MAGNETIC ELEMENTS

PRICE LIST & BROCHURE NE7 FREE ON REQUEST

REPRESENTATION DESIRED IN SOME AREAS

Methods Research Corp.
105A Willow Ave., Staten Island 5, New York

For more details circle NED-347 G1 on enclosed inquiry slip

TURN SCRAP HANDLING INTO A PROFIT!

Segregated scrap brings higher prices. Add the convenience of easier collection and handling, and in most cases you can convert scrap handling from a loss into a profit. Hundreds of industries now use Roura Hoppers to collect scrap metal. They're placed alongside machines or in strategic locations. When full, a lift truck operator picks up loaded hopper—transports it—releases latch. Hopper automatically dumps itself, rights itself, locks itself. Eight sizes, ⅛ to 4 yards capacity. Made of 3/16" steel plate, also stainless or galvanized. Standard models shipped from stock. Write for literature.

ROURA IRON WORKS, INC.
1415 Woodland, Avenue,
Detroit 11, Michigan.

ROURA Self-Dumping HOPPER

For more details circle NED-348 G1 on enclosed inquiry slip

SPAULDING SAVES ITS CUSTOMERS 30% IN PRODUCTION COSTS WITH VALUE ANALYSIS

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Gentlemen: Please supply me with a free copy of the brochure "Spaulding Value Analysis."

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For more details circle NED-349 G1 on enclosed inquiry slip

XCELITE, INC. ORCHARD PARK, N. Y.

XCELITE Canada: Charles W. Pointon, Ltd., Toronto, Ont.

INDUSTRIAL HAND TOOLS

For more details circle NED-350 G1 on enclosed inquiry slip

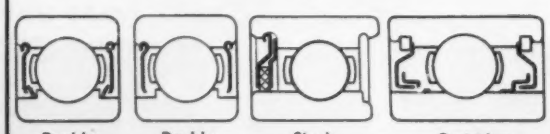
SEALED! SHIELDED! PROTECTED!

hoover quality

BEARINGS AT THEIR BEST

Hoover bearings achieve highest quality standards through the use of exclusive *Micro-Velvet* balls, accurate within millionths of an inch, and *Hoover Honed* raceways that are super smooth, superbly finished.

To preserve this superior quality throughout extended life, Hoover bearings can be protected with shields and seals to lock out dirt, grime and other harmful contaminants. As shown below, shields, seals in Teflon and felt, plus a combination of shields and seals meet a wide range of requirements. To assure highest quality . . . best protection . . . specify Hoover sealed or shielded ball bearings. Get complete information from your local Hoover bearing distributor listed in the Yellow Page Directory, or write us direct.



Double Contact Seal | Double Shield | Single Felt Seal | Cartridge

hoover

BALL AND BEARING COMPANY

5400 South State Road, Ann Arbor, Michigan

Zone Sales Offices and Warehouses: 8581 South Chicago Ave., Chicago 17, Illinois; 290 Lodi Street, Hackensack, New Jersey; 2020 South Figueroa, Los Angeles 7, California

Hoover Ball and Bearing Company
5400 South State Road, Ann Arbor, Michigan

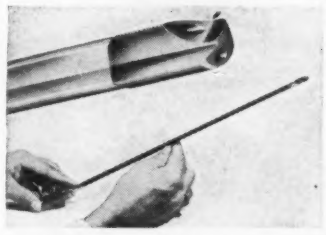
NED-7

Please send me information on Hoover sealed and shielded ball bearings.

Name_____
Title_____
Company_____
Address_____
City_____ Zone_____ State_____

For more details circle NED-351 G1 on enclosed inquiry slip

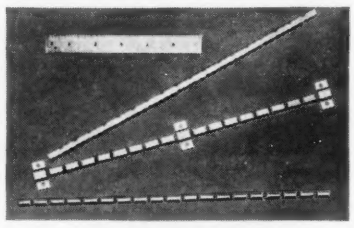
CARBIDE GUN DRILL
has two holes for cutting fluid flow



Increased flow of cutting fluid to the cutting edges from the two holes of the Double-Jet gun drill increases the life between sharpenings. One hole in the tip above the cutting edge directs fluid at the cutting edge, while the other hole in the solid carbide tip under the cutting edge takes care of chip ejection. Small chips produced will not pack along the tool shank in most materials. Sizes from 3/16 in. upward are available in specified lengths with a molded solid carbide tip brazed on a formed steel tube. Large diameters have brazed insert tip. Shanks are straight or tapered. • **Star Cutter Co.**, 34500 Grand River Ave., Farmington, Mich.

For more details circle NED-352 G1 on enclosed inquiry slip

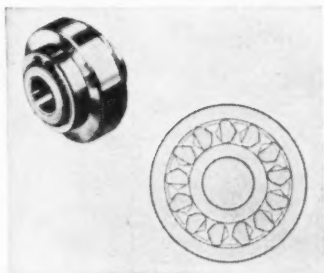
STRIP VIBRATION DAMPER
for air-frame components, air ducts



Vibration response of air frame components, electronic chassis, air ducts, and shock and vibration test fixtures is minimized by attachment of these Strip - Dampers. Weighing less than 1½ oz, the 11¾-in. long damper, which can be cut shorter if desired, is attached by special clips which are riveted or bolted in place, or with suitable epoxy glues. It is placed so that it crosses the point of maximum vibration amplitude on the structure. Vibration response is reduced by as much as 85 per cent. Damper has −80 to 350° F operational range and resists moisture, fungus, oils, and solvents, ozone, aging, and material fatigue. • **Barry Wright Corp.**, Barry Controls Div., 700 Pleasant St., Watertown 72, Mass.

For more details circle NED-353 G1 on enclosed inquiry slip

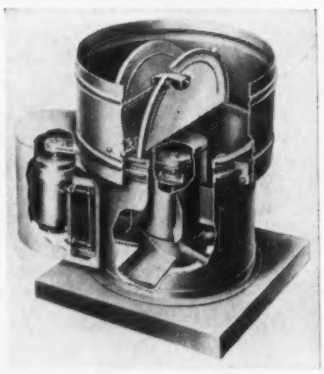
MINIATURE SPRAG CLUTCHES
in 4.5 and 17 lb-ft torque ratings



Individual sprag-energizing achieved in Model FS-02 and FS-04 Formsprag clutches enables them to meet stepped - up performance requirements in a wide range of over-running and indexing applications. Each load-carrying sprag is individually energized and controlled through separately contoured, individual leaf springs. Model FS-02 with 0.250-in. bore is rated 4.5 lb-ft, whereas Model FS-04 with 17 lb-ft torque capacity is available in 0.375 and 0.500-in. bore sizes. Over-running speeds are 2400 and 3450 rpm, respectively. Units are capable of indexing at rates up to 5000 cycles per minute. • **Formsprag Co.**, 23601 Hoover Rd., Warren, Mich.

For more details circle NED-354 G1 on enclosed inquiry slip

POWER ROOF VENTILATOR
for hot, corrosive, fume-laden air

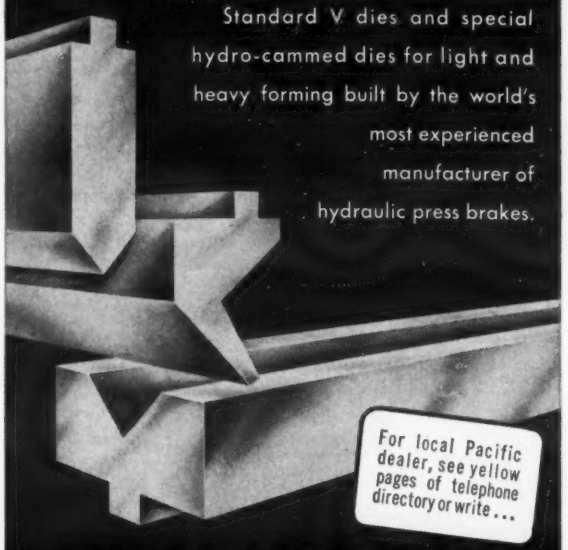


Readily installed where hot, moist, corrosive, or fume-laden air must be exhausted, Wing - Jet belt-driven power roof ventilators are available in 20 sizes with free air capacities from 2000 to 60,500 cfm. The motor is outside the gas stream, and belt tension is easily adjusted. Features include welded construction, airfoil fan blades, prelubricated self-aligning bearings, nylon damper hinge bearings, weatherproof motor housings, and hinged discharge for safe, easy access. Corrosion-resistant metals and special protective coatings are optional. • **L. J. Wing Mfg. Co.**, 2300 N. Stiles St., Linden, N. J.

For more details circle NED-355 G1 on enclosed inquiry slip

Fast, nationwide service on

PRESS BRAKE DIES



Standard V dies and special hydro-cammed dies for light and heavy forming built by the world's most experienced manufacturer of hydraulic press brakes.

For local Pacific dealer, see yellow pages of telephone directory or write . . .

PACIFIC DIES

PACIFIC PRESS & SHEAR CORP., MT. CARMEL, ILLINOIS

For more details circle NED-356 G1 on enclosed inquiry slip

The answer to your need for LOW-COST CONTINUOUS SEPARATION of TRAMP IRON from fast-moving, deep burdens

DINGS

NEW CERAMIC TYPE PERMANENT MAGNETIC PULLEY

CERAMOX V! That's Dings' new, powerful ceramic magnet material which protects machinery and product purity against tramp iron damage. Dings' new ceramic radial-pole Perma Pulleys provide high magnetic strength across entire belt width and greatest removal efficiency at high operating speeds. Other money-saving features . . .

- No operating cost. No wiring or power required
- No maintenance. Unit is automatic
- Quickly and easily installed
- High resistance to demagnetization
- High and prolonged surface strength
- Stainless steel surface for all-weather service

It will pay you to get complete details. Write for information today.

Dings

DINGS MAGNETIC SEPARATOR COMPANY

4758 W. Electric Ave., Milwaukee 46, Wis.

For more details circle NED-357 G1 on enclosed inquiry slip

When Both Compressive and Tensile Loads are Applied Through...

HEIM Unibal® ROD ENDS

We usually think of a rod end as a bearing at the ends of a rod or tube forming a mechanical push-pull linkage.

In this application, the Dillon Force Gauge, which measures compression or tension, uses Unibal Rod Ends on each leg of the alloy steel pressure bar so that load in both tension and compression is conducted against a pin placed through the Unibal, or eye, of the rod end.

Demonstrating just one of the limitless applications where Unibal bearings and rod ends prove invaluable.

Call your local bearing distributor or send for catalog or engineering aid.

THE HEIM COMPANY
800 SANFORD STREET
FAIRFIELD CONNECTICUT

For more details circle NED-358 G1 on enclosed inquiry slip

NEW idea book on Monorail handling systems for...

FACTORIES • FOUNDRIES • LAUNDRIES • PACKERS • PAPER MILLS • TEXTILE MILLS • AUTO PLANTS • WAREHOUSES • OTHERS

SEND TODAY!

Order this 56-page booklet on this magazine's inquiry form or write direct to us requesting Bulletin C-2.

AMERICAN MONORAIL 1116 E. 200th STREET CLEVELAND 17, OHIO

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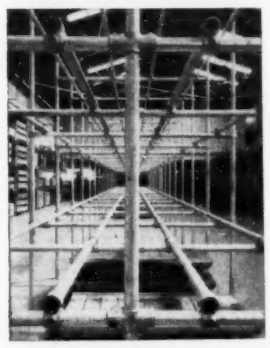
NO NAILING, NO WELDING WHEN YOU USE KEE KLAMPS



What do *you* use for building storage and pallet racks, shelving, platforms, cat walks, scaffolding and things like that? Pipe is best, but has been too hard to use because of all the cutting and threading that had to be done.

BUT NOT ANYMORE! Today . . . thanks to Kee Klamps, those miracle *Threadless Fittings*...pipe is now the easiest...fastest...generally the most economical of all! Because KEE KLAMPS do away with all pipe-threading, actually reduce pipe-cutting by as much as 80% and more.

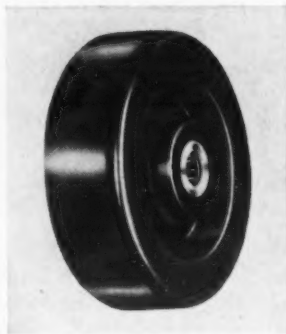
Think of it! Using plain Pipe & KEE KLAMPS, you can eliminate all nailing, bolting, welding, threading ...and almost all cutting! Now, even an unskilled worker can put up a framework of pipe in a *fraction* of the time it used to take an experienced carpenter or welder to build one out of wood or angle iron. And much better, too! Because pipe is stronger, waterproof, fireproof, won't warp or crack.

Send right now for FREE File Folder that tells all about KEE KLAMPS.

KEE KLAMPS NORTH AMERICA LIMITED
1070 WILLIAM STREET: BUFFALO 6, NEW YORK
In Canada: P. O. Box 370, Station T, Toronto 19, Ontario

▲ For more details circle NED-360 G1 on enclosed inquiry slip ▲

WATER RESISTANT WHEELS in 3¼ to 16-in. diameters

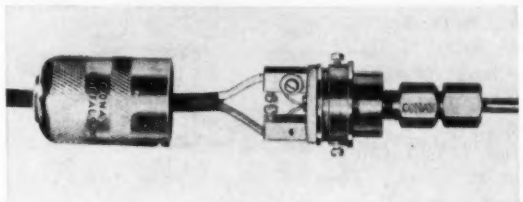


Low water absorption as well as long-wearing, easy-rolling, and floor-protective characteristics are inherent in Textite wheels. They are offered in almost any diameter from 3¼ to 16 in., tread widths from 1½ to 4 in., and capacities up to 8000 lb. Plain, roller, or sealed bearings can be ordered, as well as complete swivel or rigid casters. • **Albion Industries, Inc.**, Albion, Mich.

▲ For more details circle NED-362 G1 on enclosed inquiry slip ▲

THERMOCOUPLE HEAD for service in 1500° F

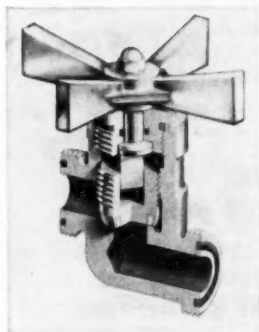
Special aluminum oxide terminal block in this B-2 thermocouple head increases its service temperature to 1500° F. The compact, closed head is chrome fin-



ished for corrosion resistance and can accommodate 30 to 14-gage lead wire by simply loosening the terminal screws. • **Conax Corp.**, 2300 Walden Ave., Buffalo 25, N. Y.

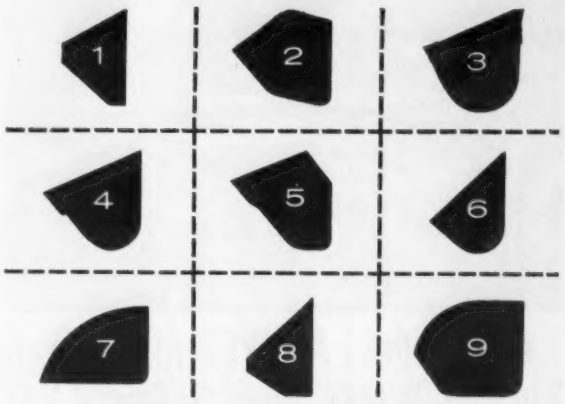
▲ For more details circle NED-363 G1 on enclosed inquiry slip ▲

HIGH PRESSURE VALVES handle liquids, gases to 6000 psi



Soft-seated valve and O-ring fitted connections and unions are combined in the CPV O-Seal System of valves and fittings for handling liquids and gases at pressure to 6000 psi. A resilient nylon disc which deforms and assumes the surface of the metal seat for positive shut-off is the heart of the system. A Teflon thrust washer and O-ring stem seals eliminate the need for valve packing. Valves and fittings are available in all standard ⅛ to 2-in. pipe or tubing sizes in either 6000 or 1500-psi pressure classes. Temperature range is from −20 to 275° F. • **Combination Pump Valve Co.**, 846 Preston St., Philadelphia 4, Pa.

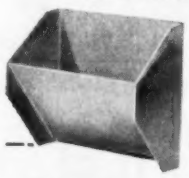
▲ For more details circle NED-364 G1 on enclosed inquiry slip ▲



You'll find the right shape for every lifting job in

LINK-BELT'S elevator bucket brigade

STEEL fabricated types



1 **CONTINUOUS AND SUPER-CAPACITY CONTINUOUS** — For use where high capacity at low speed is desired. Discharge is fast and clean.

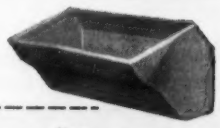
2 **"HS" HIGH SPEED** — For high-speed elevating of large capacities. High ends minimize spillage . . . low lip facilitates pickup.

3 **SALEM**—Shaped for proper filling and free discharge of granular or powdered free-flowing materials. Ends are folded around the back for extra rigidity.

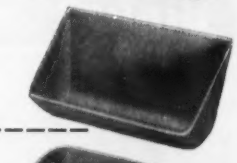
CAST malleable types

4 **STYLE AA**—Recommended for heavy, gritty materials such as sand, gravel, stone. Has a reinforced lip for digging and added wear life.

5 **STYLE AC**—For handling cement, crushed stone, and similar materials. Hooded back allows close bucket spacing for high capacity.



6 **STYLE B**—Used on inclined elevators handling coarse materials. Low front design assures clean discharge at relatively low speeds.



7 **STYLE C**—Designed for easy, efficient handling of finely pulverized or wet materials that have a tendency to stick or pack.

8 **STYLE D**—This continuous type bucket provides clean, gentle handling of coal, sand, gravel, crushed stone and other dry materials.

9 **STYLE SC**—Ideal for elevating materials which have a tendency to pack. Can handle greater capacities than styles A or C.

FOR FULL INFORMATION on Link-Belt's complete line of elevator buckets, contact your nearest Link-Belt office or authorized stock-carrying distributor. Or write for Catalog 1050.

35,391

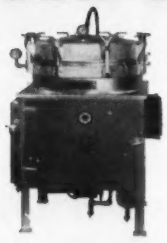
LINK-BELT

ELEVATOR BUCKETS

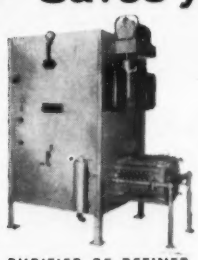
LINK-BELT COMPANY, Prudential Plaza, Chicago 1, Ill.

▲ For more details circle NED-365 G1 on enclosed inquiry slip ▲

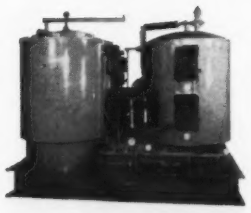
HILCO Oil Purification Equipment Saves your Oil, Machinery and Money



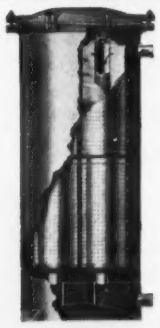
OIL RECLAIMER



PURIFIER-RE-REFINER



HIGH CAPACITY RECLAIMER



FILTER

One of these HILCO units will take care of your oil filtering or purification needs. Write to HILLIARD stating your problem and we will make a recommendation. A field representative will call if you prefer.

The complete line of equipment for reclaiming, filtering, purifying and re-refining oil . . . HILCO

Recover large quantities of oil at low cost, keep your equipment in top condition with clean oil, reduce maintenance costs and increase production. The Hilliard catalog will show you oil maintenance equipment for your specific application along with complete descriptive and engineering data. Write today!

There is a HILCO to take care of YOUR OIL PURIFICATION PROBLEM

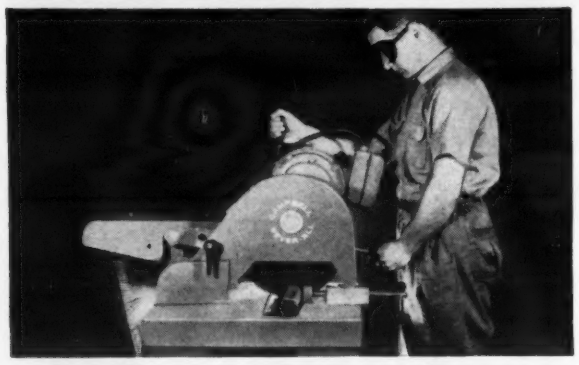
Write for this FREE Catalog . . .

Recommendations at no obligation

The HILLIARD Corporation 31 W. Fourth St. Elmira, N.Y.

IN CANADA: UPTON-BRADEEN • JAMES, LTD. • 890 YONGE ST., TORONTO • 8760 VERVILLE ST., MONTREAL

▲ For more details circle NED-361 G1 on enclosed inquiry slip ▲



NEW Model 1-A SEVER-ALL CUTS AT 3 to 6 SECONDS PER SQ.IN.–ECONOMICALLY

- New abrasive cutting machine—less than $500
- Wheel oscillation provides capacity up to 2" square solids, 3½" O. D. pipe and tubing, 3" angle iron, 4" channels
- Clean cuts on large or small sections
- Cuts cold rolled, stainless, and alloyed steel; cast iron; non-ferrous metals
- Little or no set-up time required
- Just two wheels for all SEVER-ALL cutting jobs
- Available from distributors

Write FOR BULLETIN DH-106

SEVER-ALL ABRASIVE CUTTING MACHINES ACCO
Allison-Campbell Division
American Chain & Cable Company, Inc.
930 Connecticut Avenue, Bridgeport 2, Conn.

For more details circle NED-366 G1 on enclosed inquiry slip

New Binks Dispo Spray Booth has...

automatic curtain rolls away paint overspray

The secret: a 150-yard disposable curtain which collects overspray. Economical . . . roll costs about 80% less than most paint filters. Safe . . . manufactured to meet NFPA standards. Automatic . . . curtain advances when it collects a given amount of overspray. Simple . . . one man can change roll in just 5 minutes.

Send today for Bulletins A-27-14 & 15.

1235

Binks Manufacturing Company, 3118-B Carroll Ave., Chicago 12, Ill.

REPRESENTATIVES IN PRINCIPAL U. S. & CANADIAN CITIES • SEE YOUR CLASSIFIED DIRECTORY

Binks | Everything for spray painting

For more details circle NED-367 G1 on enclosed inquiry slip

paging plus private 2-way intercom

New dual-function Executone units keep every man on your staff in instant contact . . . let you locate and talk with people anywhere in your plant or offices, or on the grounds . . . even in high-noise areas.

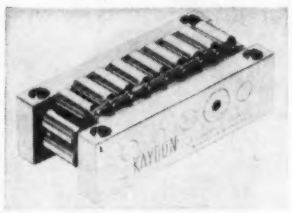
Executone Dept. D-8
415 Lexington Ave., N. Y. 17, N. Y.

Please send detailed information on paging and intercom for

☐ low-noise areas Name_____
☐ hazardous areas Company_____
☐ high-noise areas Address_____
☐ outdoor areas City_____ Zone____ State_____

For more details circle NED-368 G1 on enclosed inquiry slip

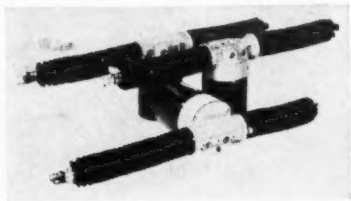
RECIRCULATING ROLLER BEARING for low-friction way service



Having a coefficient of friction as low as 0.00025 under a load of 2000 lb and ¼ ipm linear motion, Recirc-L-Way bearing is designed for high capacity applications including vertical or linear reciprocating motion of heavy machine elements or slides. A recirculating cage gives positive roller guidance between lipped raceways. The cage also maintains uniform spacing of rollers to prevent rubbing friction. Further contributing to low friction are ultraprecision finishes. Bearings are now made to order, but plans are being made to stock them. • **Kaydon Engineering Co.**, McCracken Street, Muskegon, Mich.

For more details circle NED-369 G1 on enclosed inquiry slip

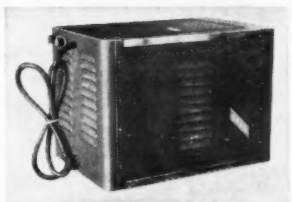
LINEAR ACTUATORS have 1½ to 30-in. strokes



Linear positioning in proportional response to a control signal from a dial, Clip-Card, punched tape, or other input is provided by LA-11 and LA-15 Lineatrol actuators. They afford precision stroke control from 1½ to 30 in. or more, and are compatible with control systems using low level direct current signals or 3 to 15-psi air. Positioning machine tools, gates, slides, or valves and controlling rate, load, tension, level, or proportion are applications. Thrust capacities are up to 300 lb, stroking rates from 5½ to 240 ipm, and standard accuracies are up to 1 part in 1000. Special coarse-fine Lineatrols provide resolutions to 1 part in 30,000. Limit switches, special transducers, explosionproof enclosure, and a bellows type boot protector for the rack are optional. Single and two-phase types are available, with mounting by face, foot, or bracket. • **Jordan Controls, Inc.**, 3235 W. Hampton Ave., Milwaukee 9, Wis.

For more details circle NED-370 G1 on enclosed inquiry slip

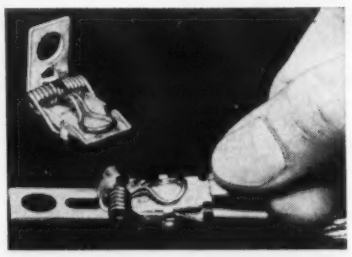
INSTRUMENT AIR DRYER handles 10 cfm of 100 psi air



Proper functioning of pneumatic air control systems is assured with the Model 101AD defrigerated air dryer. It receives air directly from compressor tank at up to 150 psi pressure, cools it, and removes condensed moisture through a discharge trap. Unit operates on 115-v ac and dehumidifies 10 cfm of 100 psi air to −12° F. Air is cooled to nearly constant temperature regardless of fluctuations in air flow through the unit. Features include a thermal switch which controls refrigeration and a centrifuge-filter to prevent blow-by of condensed moisture and foreign matter into air lines. Totally enclosed unit measures 22 x 16 x 14¾ in. • **Zeks Industries, Inc.**, Westchester Pike & Providence Road, Edgemont, Pa.

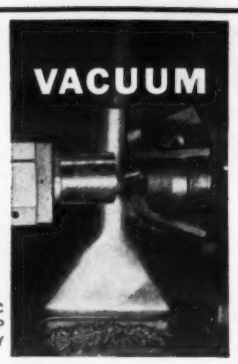
For more details circle NED-371 G1 on enclosed inquiry slip

BRUSH TERMINAL ASSEMBLY quick-disconnect type rated 150 amp



A straight version of the 90-degree bent quick-disconnect terminal assembly for brushes is now available and is better suited to certain electrical machinery. One major advantage is that two spade terminals can be inserted in one clip, eliminating the need for extra clips in many installations. Clips are made of silver-plated beryllium copper, and spade terminals are of silver-plated copper. Assemblies facilitate brush replacement in industrial and utility equipment and can carry a continuous current of 150 amp. Shown are the original bent and the new straight clip, both of which have new stainless steel springs. • **National Carbon Co.**, 270 Park Ave., New York 17, N. Y.

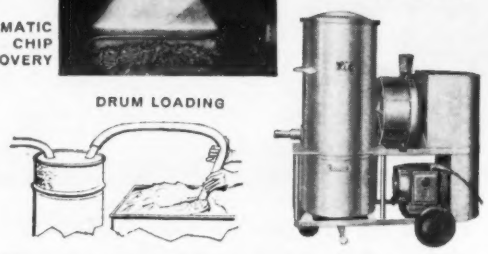
For more details circle NED-372 G1 on enclosed inquiry slip



at Work... INVINCIBLES May Solve Your Problem!

AUTOMATIC CHIP RECOVERY

DRUM LOADING



They recover, process, convey scores of materials — metals, liquids, lint, gases, bulk items. They have solved hundreds of production problems, reduced costs, simplified the design of automatic machinery. And portable units can serve as vacuum cleaners during off-periods. In 28 standard models, ½ to 10 H.P. Learn how Invincible vacuum equipment is used to cut costs . . .

SEND FOR NEW "INVINCIBLE VACUUM EQUIPMENT" FOLDER

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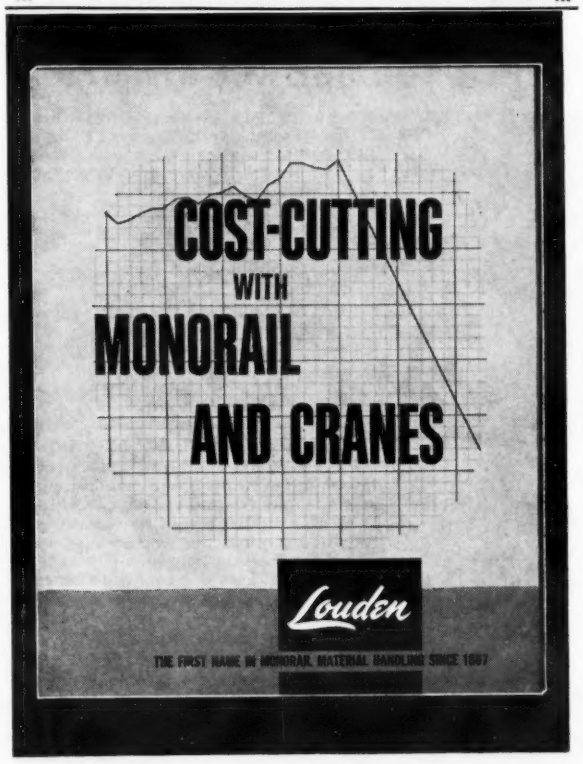
VACUUM CLEANER MFG. CO. • DOVER, OHIO

For more details circle NED-373 G1 on enclosed inquiry slip



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THE LOUDEN MACHINERY COMPANY
712 Court, Fairfield, Iowa
A Subsidiary of Mechanical Handling Systems Inc.
Plants in Fairfield, Iowa and Clark, New Jersey

Louden

MONORAIL & CRANES

SINCE 1867 . . . THE FIRST NAME IN MATERIALS HANDLING

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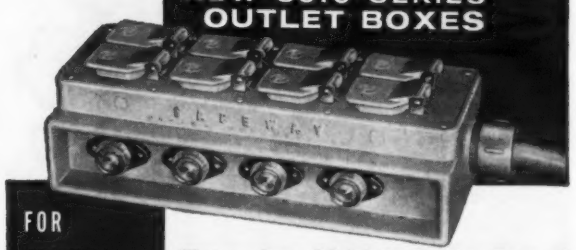
NOW! SAFE POWER MULTI-TAP NEW 3010 SERIES OUTLET BOXES



FOR INDOOR AND OUTDOOR USE WITH PORTABLE ELECTRIC EQUIPMENT

Heavy duty Multiple Outlet Box of "SAFETY YELLOW"* NEoTEX.* Cover plate of unbreakable plastic in three types to accommodate four duplex receptacles, or four single receptacles (1.390 face dia. or 1.593 face dia.).

- Furnished less receptacles. Copper bus bars and solderless terminals afford easy wiring.
- Also available with weather-proof flip lids, providing tight seal for outdoor use.
- Each outlet can be fused, permitting gang operations with individual circuit protection.

* Registered

For free brochure, write—Dept. 110

DANIEL WOODHEAD COMPANY
15 N. Jefferson St., Chicago 6, Illinois

For more details circle NED-375 G1 on enclosed inquiry slip

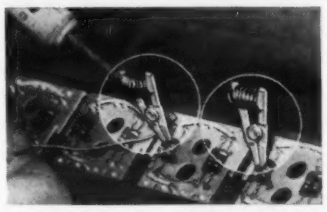
The Pangborn Vibratory Finishing Machine This machine makes itself useful in many ways: cleaning, descaling, radiusing, fine-finishing, burnishing or coloring. It can do all this with metals, alloys, many types of plastic and ceramic parts . . . and at speeds up to 100 times faster than conventional methods. It cleans the intricate or shielded surfaces you can't reach with barrel finishing or other means.

Available in many sizes, its standard equipment includes variable speeds and exclusive air-cushioned suspension which assures automatic leveling and amplitude control. Auxiliary equipment, media and compounds available for every need. PANGBORN CORPORATION, 2400 Pangborn Blvd., Hagerstown, Maryland.

Pangborn OF HAGERSTOWN

For more details circle NED-376 G1 on enclosed inquiry slip

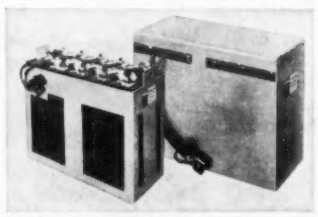
HEAT SINK CLIP
protects semiconductors in soldering



Easy-to-use aluminum heat sink clip protects semiconductors during the soldering phase of electronic assembly. It fits around the wire running between the semiconductor and the joint to be soldered, and absorbs and dissipates the heat that runs up the wire toward the semiconductor. Assembly time is reduced, and costly rejects are minimized. The No. A1942 clips list for $19.80 per 100. • **Avtron Mfg., Inc.**, 10409 Meech Ave., Cleveland 5, Ohio.

For more details circle NED-378 G1 on enclosed inquiry slip

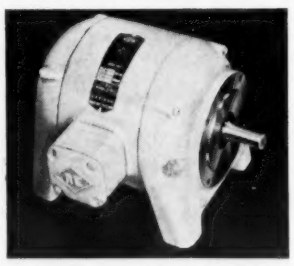
ELECTRIC HAND TRUCK BATTERY
has lifetime guarantee



Repair or replacement of any Exide Nickel-Iron Alkaline electric hand truck battery that drops below 80 per cent of rated capacity in one-charge-a-day service will be repaired or replaced without cost. The only proviso is that the user charge and maintain the battery properly with approved equipment. Claims for the new batteries include freedom from injury by standing discharged, capability of withstanding accidental short circuit or reverse charge, ability to take rapid charge as long as electrolyte levels and temperatures are within safe limits, withstand freezing, and indefinite idle life without permanent loss of capacity. • **Electric Storage Battery Co.**, Exide Industrial Div., Rising Sun & Adams Avenues, Philadelphia 20, Pa.

For more details circle NED-379 G1 on enclosed inquiry slip

SANITARY MOTORS
made in 3/4 to 7 1/2-hp ratings



Need for extreme sanitation precaution is met by this line of sanitary motors, designed to conform to the 3A Sanitary Standards Code. Typical features are its splashproof aluminum alloy, noncorrosive frame; stainless steel shaft; acid resistant finishes; and a smooth convex contour. Motors are made in 3/4, 1, 1 1/2, 2, 2 1/2, 3, 4, 5, 6 1/4, and 7 1/2-hp ratings for foot mounting or with NEMA Type C face mounting flange for direct assembly to various makes of sanitary pumps. • **Reuland Electric Co.**, Mission & Fremont, Alhambra, Calif.

For more details circle NED-380 G1 on enclosed inquiry slip

how much do you miss without this?

Spray Nozzles

COMPLETELY DESCRIBED AND ILLUSTRATED IN CATALOG 24—WRITE FOR YOUR COPY

The most comprehensive spray nozzle catalog ever printed. Thousands of designs and sizes . . . unequalled choice of capacities, characteristics and materials. The result of over twenty-five years of specialized research, design and manufacturing.

SPRAYING SYSTEMS CO.
3211 RANDOLPH STREET • BELLWOOD, ILLINOIS

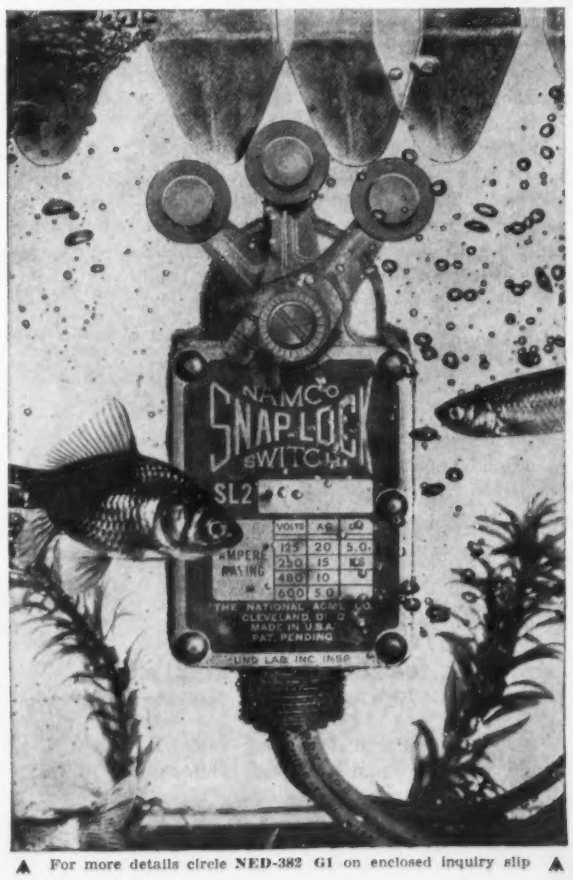
ADVANCED DESIGN • GREATER PRODUCT CHOICE • PROMPT SERVICE

For more details circle NED-381 G1 on enclosed inquiry slip

Take a close look at this new limit switch! It's so immune to moisture, we'll guarantee it, electrically and mechanically, for one year or 10,000,000 operations . . . whichever comes first. We call it our Super-Sealed SL2-T. If you've ever had limit switch trouble caused by water, soluble oils, condensate or *any* kind of moisture, you'll want complete details. Call, write or wire. **National Acme**

THE NATIONAL ACME COMPANY 182 E. 131st STREET CLEVELAND 8, OHIO

Sales Offices: Newark 2, N. J., Chicago 6, Ill., Detroit 27, Mich.



For more details circle NED-382 G1 on enclosed inquiry slip

FREE IDEAS

for . . .

. . . increasing production

. . . improving quality

. . . saving money

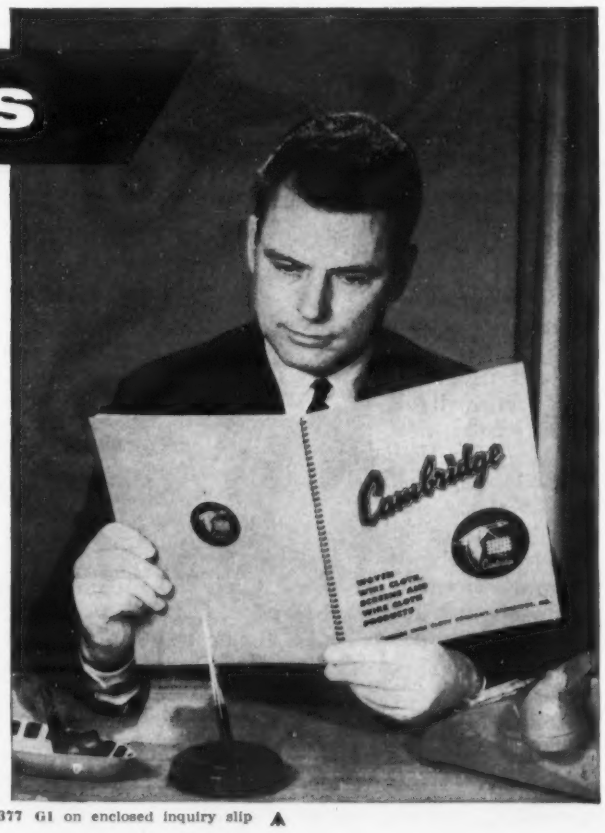
. . . solving other problems with Cambridge Wire Cloth

Write for your free copy of our 102-page illustrated technical manual. Gives typical applications, trade definitions, information on how-to-order wire cloth, metal and alloy information, reference and other data, also illustrates meshes weaves, typical fabrications.

Or, for detailed information on how Cambridge Wire Cloth can help you in your operations, call your Cambridge Field Engineer. He's listed in the yellow pages under "Wire Cloth".

The Cambridge Wire Cloth Co.
Department C • Cambridge 7, Md.

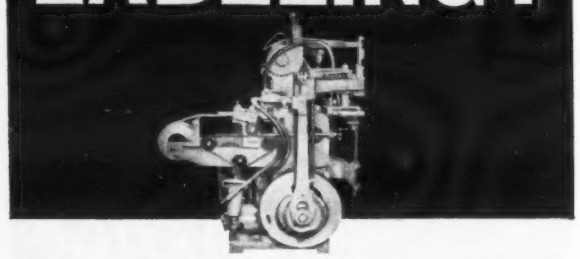
Manufacturers of Metal-Mesh Conveyor Belts, Flat Wire Conveyor Belts, Wire Cloth, Wire Cloth Fabrications, Gripper ® Metal-Mesh Slings



For more details circle NED-377 G1 on enclosed inquiry slip

MUST YOU MEET

SHORT-RUN LABELING?



If short runs and a wide variety of labels are part of your labeling problem, this machine can help you. Industries such as drug, hardware, electronic, automotive and textile have found that *roll labeling without glue* offers matchless control, efficiency and convenience.

New Jersey Machine Corp. offers the economies of roll labels, the ability to imprint valuable data within a master label, and a quick-start no-glue labeling operation. Write today for full information.

Labeling, Cartoning, Paper Box Machinery
NEW JERSEY MACHINE CORPORATION

Main Office and Plant: 16th Street and Willow Avenue, Hoboken, New Jersey • Oldfield 9-0483
Factory Sales & Service Branches: 325 W. Huron St., Chicago 10, Ill. 2500 W. 6th St., Los Angeles 57, Cal.

For more details circle NED-383 G1 on enclosed inquiry slip

666. Jomac work glove. Reversible—any two make a pair. Men's knitwrist.

It's GLOVEMANSHIP that makes JOMACS your best buy in industrial work gloves

GLOVEMANSHIP is an art. It involves combining the ideal yarns, processing the cloth by techniques which will impart the wearing and protective qualities desired, creating patterns, styling cuffs and, finally, producing the finished gloves with real craftsmanship. Jomac practices GLOVEMANSHIP.

What does GLOVEMANSHIP mean to you? It means lower glove costs with quality gloves that afford maximum dexterity, more comfort; that resist oils, greases and stains; that protect hands and forearms against such hazards as cuts, burns, bruises and abrasions; that can be washed time after time.

For better fit, greater dexterity, more comfort, longer wear, and maximum safety in handling most chemicals, oils, greases, etc.—specify North PVC Coated Gloves.

To keep workers dry and comfortable in foul weather and to give them superior protection against chemicals, oils and greases—specify North PVC Protective Clothing.

WRITE FOR MORE INFORMATION ABOUT JOMAC INDUSTRIAL WORK GLOVES TODAY

JOMAC Jomac Inc., Dept. G Philadelphia 38, Pa.

In Canada: James North Canada Company Ltd., Simcoe, Ont.

"JOMAC Sells Quality . . . and Quality Sells JOMAC!"

For more details circle NED-384 G1 on enclosed inquiry slip

FLOOR MAINTENANCE MACHINE
scrubs, picks up dirt, dries floor

Operating on battery power, ClarkeAmatic Model PS-18BP Scrubber-Vac cleans an 18-in. swath at speeds of 120 to 132 fpm and is capable of scrubbing 3500 to 6000 sq ft per hr. This compact machine scrubs, picks up dirt and cleaning solution, and squeegee-dries floors. Orbital scrubbing action at 3400 rpm is imparted to the replaceable nylon pad which operates in the 5 x 18-in. head. A moistureproof motor drives a two-stage turbine to give 60-in. water lift. The vacuum tank holds 6½ gal and is easy to empty with a dump valve. Price, including battery charger, is under $835. • **Clarke Floor Machine Co.**, 30 E. Clay Ave., Muskegon, Mich.

For more details circle NED-385 G1 on enclosed inquiry slip

BOTTLE POURING SPOUT
is no-drip open-close control

Made of virgin, high impact polyethylene, Flo-Top pouring spouts for bottles combine the features of a bottle cap with directional flow, a no-drip spout, and an open-close control. Fast flow is assured by a venting arrangement. Container is resealed with a twist of the two-piece cap. This red cap fits all 28-mm bottles having a 400 or 414 trim. • **Multi-Meter Corp.**, 1635 Coining Dr., Toledo 12, Ohio.

For more details circle NED-386 G1 on enclosed inquiry slip

SMALL SPEED REDUCER
mounts on 1¼-in. shafts

Smallest in the Torque-Arm line is the TD025 fractional-hp speed reducer which has a gear ratio of 25:1 and will transmit 0.95 hp at output of 85 rpm. A predetermined combination of reducer and V-belt drive can provide any speed ratio up to 175:1. Unit is equipped with a torque arm for easy adjustment of V-belt drive center distance when used as a shaft-mount reducer. Overload release is optional. Flange mounted, it can be bolted directly to driven machine. Reducer is bored for mounting on 1¼-in. shafts, although bushings will adapt it for smaller shafts. A special unit for 1 3/16-in. shafts is also available. • **Dodge Mfg. Corp.**, 600 S. Union St., Mishawaka, Ind.

For more details circle NED-387 G1 on enclosed inquiry slip

CARTON STAPLER
is wide-crown, air-operated unit

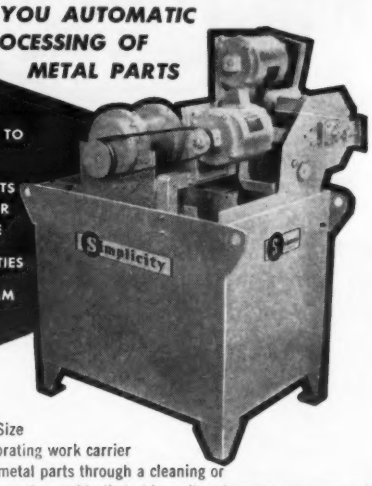
Filled containers are sealed entirely from the outside by Model D16AD air-operated wide-crown carton stapler. It will staple single, double, and triple-wall board, as well as closed regular slotted, full overlap, partial overlap, end flap, or almost any other kind of corrugated container. It performs effectively on air pressures from 40 to 60 psi and can blind clutch staples in two thicknesses of B flute board, or penetrate completely through two thicknesses of double-wall board. Heavy-duty magazine accommodates staple leg lengths of 7/16, ⅝, ¾, and ⅞ in. Hand-powered Model D16 with the same features is also available for plants without air power. • **Bostitch, Inc.**, 2025 Briggs Dr., East Greenwich, R. I.

For more details circle NED-388 G1 on enclosed inquiry slip

NEW JUNIOR SIZE VIBRA-WASHER

GIVES YOU AUTOMATIC PROCESSING OF METAL PARTS

LABOR SAVING
READILY ADAPTABLE TO MANY OPERATIONS
NO NESTING OF PARTS DURING CLEANING OR CONDITIONING CYCLE
ADJUSTABLE CAPACITIES
ELECTRIC—GAS—STEAM HEATING ELEMENTS



The new Simplicity Junior Size Vibra-Washer employs a vibrating work carrier that automatically conveys metal parts through a cleaning or conditioning bath. It cleans so thoroughly that chips, oil and grease are removed from even blind or slotted openings; cleans so gently even the most delicate threads or flanges are not harmed.

If you have a tough cleaning or conditioning job, Simplicity Engineering Company can help. For information, write or call the Industrial Washer Division.

223

Simplicity TRADE MARK REGISTERED
ENGINEERING COMPANY • DURAND 15, MICH.
FOR CANADA: Simplicity Materials Handling Limited, Guelph, Ontario

For more details circle NED-389 G1 on enclosed inquiry slip

SOLVE YOUR STICKING, SEIZING, AND CLINGING PROBLEMS with... SLIDE

CLEAN
COLORLESS
NON-TOXIC

FAST
EASY
AEROSOL
APPLICATION

for
MACHINERY
KNIVES
PRESSES
GLUERS
SEALERS
CRIMPERS
HOT ROLLS
AND PLATES

FROM YOUR INDUSTRIAL DISTRIBUTOR OR ORDER DIRECT
GIANT 20 OZ. CAN

PRICES SHIPMENT SAME DAY
SINGLE CAN. $2.00
1 to 5 dozen . . 18.47 per doz.
6 to 11 dozen . 17.54 per doz.
12 to 23 doz. . 16.66 per doz.
24 doz. or more . 15.00 per doz.
FREIGHT PREPAID

When things stick, cling or seize—you're stuck. SLIDE can be your ace-in-the-hole. In packaging, printing, production of all kinds, SLIDE makes parts work or cut smoothly without gumming, discoloration, or toxic effect. Superior to anything on the market. Get un-stuck with smooth, slick SLIDE.

PERC E. HARMS CO.
1739 Harding Road • HIllcrest 6-7244 • Northfield, Illinois
A complete line of INDUSTRIAL AEROSOLS

For more details circle NED-390 G1 on enclosed inquiry slip

LOCATE HOLES to .001"

up to ten times faster than on a surface plate

No reference standards are required with the Sheffield-Ferranti machine for measuring and laying out location of holes and surfaces to X & Y coordinates. Part tolerances of .001 and larger are indicated to the nearest .0005 with direct visual readout in lighted ¾" numbers. Instant zero reset—working range 15" x 24". Save time by rushing request for Bulletin FI-22.

The SHEFFIELD Corporation Dayton 1, Ohio
a subsidiary of The Bendix Corporation

For more details circle NED-391 G1 on enclosed inquiry slip

THIS NEW DISPENSING CAN

Gives you the best hand care deal since soap was invented

3 WASH-UPS FOR A PENNY

THE METERING NOZZLE PREVENTS WASTED LIQUID

THE NEW CAN ELIMINATES REFILLING OR RECHARGING

You Save Three Ways

HAMMONS IS THE ORIGINAL LIQUID WATERLESS HAND CLEANER

KEEPS HANDS BOTH HEALTHY AND CLEAN

See your sanitary supply distributor or write us now for data and prices

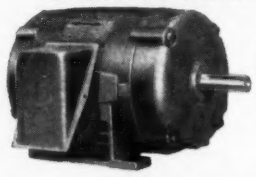
Hammons Products, Inc.
824 WEST MAIN STREET FORT WAYNE, INDIANA

For more details circle NED-392 G1 on enclosed inquiry slip

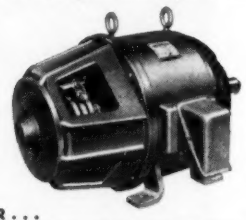
The <IMPERIAL> Line

MOTORS • GENERATORS • MOTOR-GENERATOR SETS

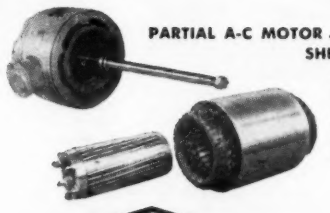
BEST POWER FOR STANDARD AND SPECIFIC-PURPOSE APPLICATIONS



DRIP-PROOF A-C MOTOR—*Today's Best Buy for Most Applications—Ratings from 1 to 200 Hp.—Designs Include Flange and Face Types, Multi-Speed, etc.*



WOUND-ROTOR MOTOR—*Open Construction—Allows Easy Access for Inspection and Excellent Ventilation and Self-cleaning Action—From ½ to 150 Hp.*

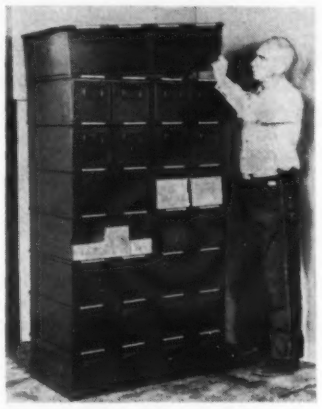


PARTIAL A-C MOTOR . . . SHELL-TYPE SHAFTLESS MOTOR *. . . Other Special or Specific Types . . . Provide Maximum Power in Minimum Space . . . Blend with Basic Design of Machines.*

<IMPERIAL> ELECTRIC COMPANY
84 Ira Avenue • Akron 9, Ohio

For more details circle NED-393 G1 on enclosed inquiry slip

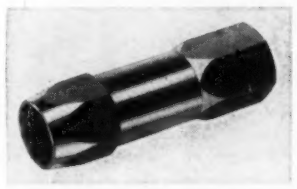
STACKING SHELVES
easily assembled to hold boxes



Each 36½-in. wide, 19-in. deep, 8-in. high Stackshelf holds four boxes. A stacking rim permits safe, high stacking unit upon unit, and simple rearranging and expansion. Shelf rim has a card holder for product identification. Easily removable boxes with handles on both ends measure 18½ x 8½ x 7¾ in. Standard color is green; other colors are available in quantity orders. • **Stackbin Corp.**, 1081 Main St., Pawtucket, R. I.

For more details circle NED-395 G1 on enclosed inquiry slip

CHECK VALVE
for surgeproof operation



Operating pressure of Deccto low cost check valve is 3000 psi and up, with a 10-psi drop in pressure at rated flow. It is surgeproof in operation and has a leakproof check action. A knife-edged metal-to-metal valve seat is incorporated. Operating temperature range is −250 to 500° F. Available sizes are from ⅜ to 1 in. • **Bruning Co.**, 609 S. Ninth, Lincoln, Nebr.

For more details circle NED-396 G1 on enclosed inquiry slip

PRESSURE SWITCHES
for pressure, vacuum, differential

Series 642 pressure switches incorporate Belleville spring sensing elements and include models for pressure, vacuum, or differential service. Operating ranges are pressure, 1 to 100 psi; vacuum, 1 to 125 psi; and differential, 1 to 80 psi. Explosion-proof models are UL-listed for Class I Group A, B, C, and D, and Class II Group E, F, and G. The switching element is hermetically sealed. • **Custom Component Switches, Inc.**, 3137 Kenwood St., Burbank, Calif.

For more details circle NED-397 G1 on enclosed inquiry slip

The OFFICE VALET®

As modern as today, Office Valet Wardrobe Racks fit in anywhere, harmonize with any decor. They hold hats, coats, overshoes and umbrellas efficiently (accommodate 3 persons per square foot of floor space) and properly (with hats on dustproof shelves; coats on spaced apart wooden garment hangers — aired, dry and "in press"). Built for lifetime service of heavy gauge welded steel and finished in choice of colors and baked finishes. Exactly matching add-on units (end to end or back to back) always available.

Write for Catalog OV-8

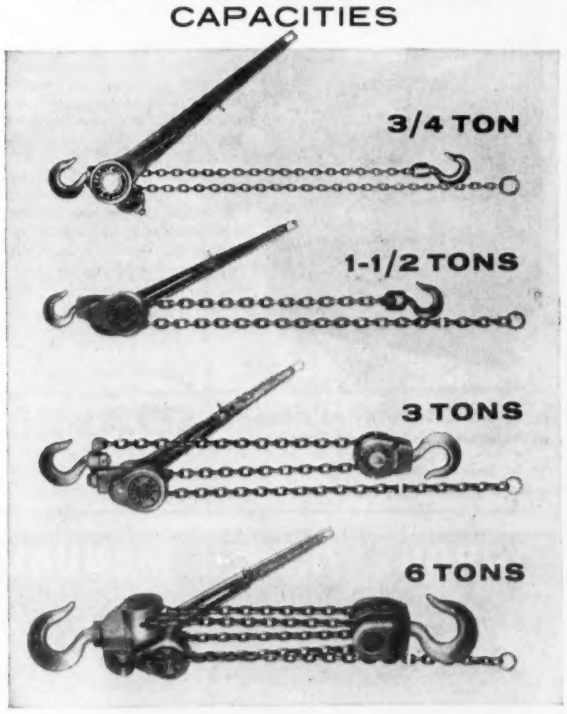
VOGEL-PETERSON COMPANY
RT. 83 AND MADISON ST. • ELMHURST, ILL.

For more details circle NED-398 G1 on enclosed inquiry slip

NOW... *Made of Aluminum!*

WRIGHT Type "C" Pull-A-Ways

IN ¾, 1½, 3 AND 6 TON CAPACITIES



For easier portability at no sacrifice in proved performance, Wright now uses aluminum alloy castings for the gear case, handle and covers on all models of the Type "C" Pull-A-Way. Hooks, load chain and chain sheave are made of alloy steel as before. Truly versatile performers on hundreds of quick hook-up jobs, Type "C" Pull-A-Ways offer other outstanding features such as: positive load brake that securely holds the load at any point, lifetime lubrication of all internal parts, blocked chain to fit the load sheave with greater accuracy. Weights: ¾ ton, 12½ lbs.; 1½ ton, 23½ lbs.; 3 ton, 36½ lbs.; 6 ton, 63 lbs.

Write to our York, Pa., office for Bulletin DH-56

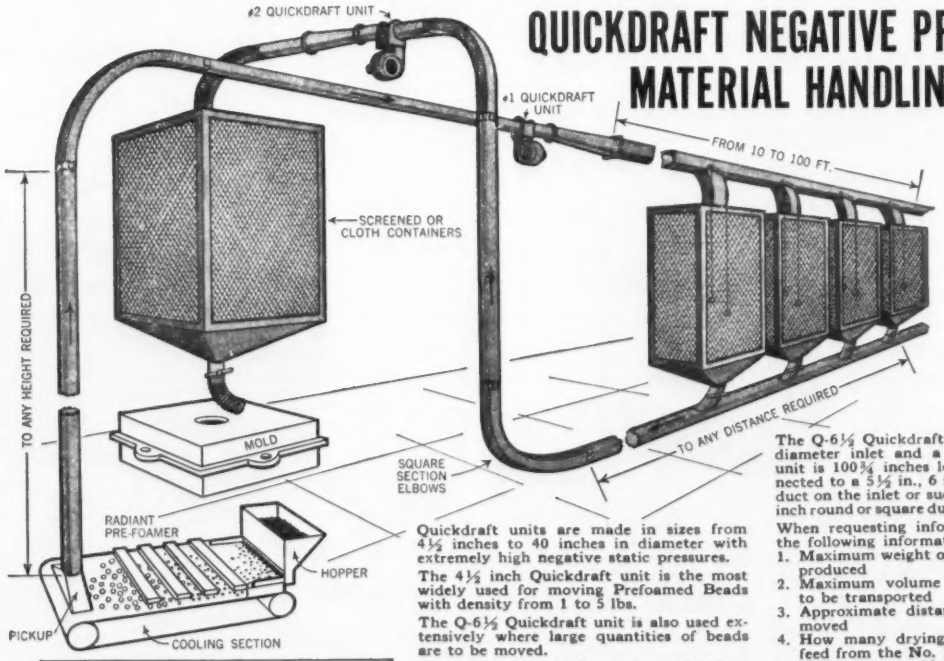
WRIGHT HOISTS

Wright Hoist Division • American Chain & Cable Company, Inc. ACCO

York, Pa., Atlanta, Chicago, Denver, Detroit, Houston, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

For more details circle NED-399 G1 on enclosed inquiry slip

QUICKDRAFT NEGATIVE PRESSURE MATERIAL HANDLING UNITS



Quickdraft units are made in sizes from 4½ inches to 40 inches in diameter with extremely high negative static pressures.

The 4½ inch Quickdraft unit is the most widely used for moving Prefoamed Beads with density from 1 to 5 lbs.

The Q-6½ Quickdraft unit is also used extensively where large quantities of beads are to be moved.

The Q-4½ Quickdraft unit has a 4½ inch diameter inlet and a 10 inch outlet, the unit is 94¾ inches long and can be connected to 4 in., 4½ in., or 5 inch duct on the inlet or suction end and to a 10 inch round or square duct on the exhaust end.

The Q-6½ Quickdraft unit has a 6½ inch diameter inlet and a 12 inch outlet, the unit is 100¾ inches long and can be connected to a 5½ in., 6 in., 6½ in., or 7 inch duct on the inlet or suction end and to a 12 inch round or square duct on the exhaust end.

When requesting information, please give the following information:

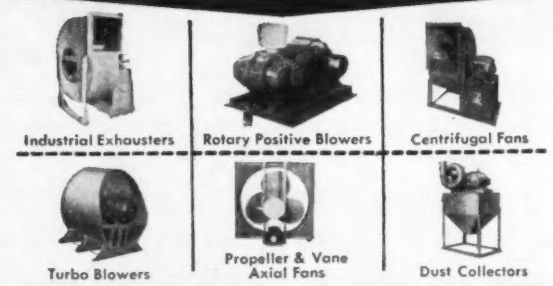
1. Maximum weight of beads to be produced
2. Maximum volume or weight of beads to be transported
3. Approximate distance beads are to be moved
4. How many drying containers you will feed from the No. 1 Quickdraft unit
5. How many molds containers you will feed from the No. 2 Quickdraft unit
6. Please send a sketch of your proposed installation. We will immediately send you the cost and the proper size unit best suited for your installation.

THE QUICKDRAFT CORPORATION
P. O. Box 87-L • Canton, Ohio

10160-QD

For more details circle NED-394 G1 on enclosed inquiry slip

REBUILT and NEW AIR MOVING EQUIPMENT



SAVE 30% TO 50% . . . ON UNITS YOU NEED!

We can supply all leading makes of air moving equipment . . . *fully guaranteed.* Whether you need 1 cu. ft. of air or 100,000 for any type of industrial application, you'll find the equipment you need in our stock.

FREE

AIR MOVING EQUIPMENT DATA FOLDER

With this handy MEYER DATA FILE you can quickly select the unit you need and save money too. Data Folder contains engineering data sheets on Steel Plate Exhausters, Rotary Positive Blowers and Pneumatic Conveyors . . . plus equipment stock lists on new and rebuilt air moving units of every description and brand with current sales prices.

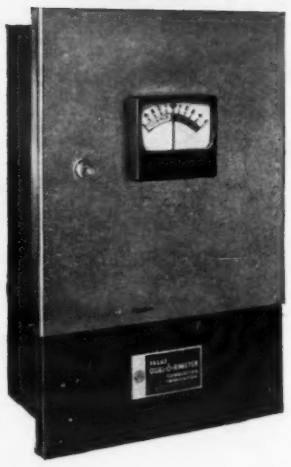
WRITE - TODAY

Wm. W. Meyer & Sons Inc.
8249 Elmwood Avenue
Skokie, Illinois

For more details circle NED-400 G1 on enclosed inquiry slip

it's NEW from Selas!

QUAL-O-RIMETER* COMBUSTION INDICATOR



Providing for accurate combustion-control, this *new* Selas instrument indicates changes in flame characteristics caused by variations in gas fuel supply and air-gas mixture. The QUAL-O-RIMETER detects and indicates changes as little as ±5 Btu in fuel gas and ±0.5% air in air/gas mixtures in seconds. What's more, changes in flame configuration are indicated just as quickly! By presampling air/gas mixtures to ovens, lehrs, furnaces and brazing machines, the QUAL-O-RIMETER permits proper adjustment of fuel ratios before production is adversely affected. For details, write for Bulletin Q-2.

SELAS CORPORATION OF AMERICA
197 Dreshertown Rd.
Dresher, Pa.

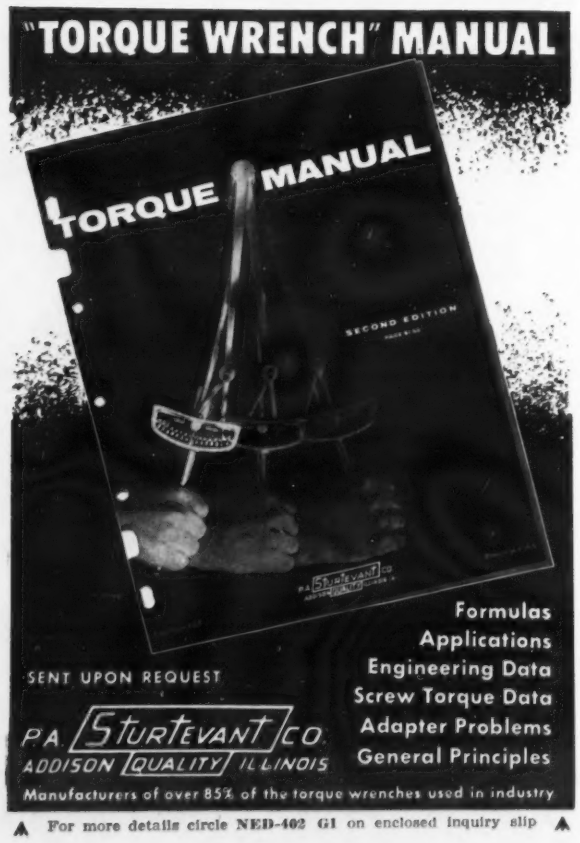
HEAT AND FLUID PROCESSING ENGINEERS
DEVELOPMENT / DESIGN / CONSTRUCTION

SELAS

*T. M. Reg. Applied For

For more details circle NED-401 G1 on enclosed inquiry slip

"TORQUE WRENCH" MANUAL



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Applications
Engineering Data
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Adapter Problems
General Principles

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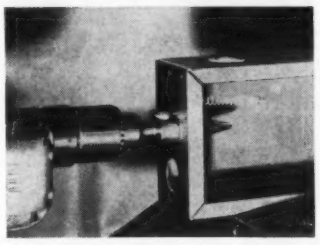
P A STURTEVANT CO.
ADDISON QUALITY ILLINOIS

Manufacturers of over 85% of the torque wrenches used in industry

For more details circle NED-402 G1 on enclosed inquiry slip

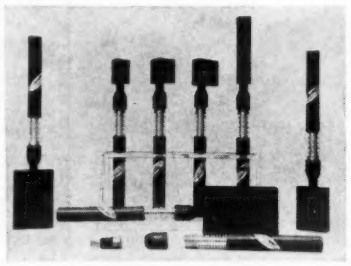
CONE-SHAPED DRILL
makes ½ to 1½-in. holes in metal



A single cone-shaped drill will produce ¼ to 1¼-in. hole diameters in metal, plastic, or any other relatively thin material. It is particularly suited for sheet metal work. The 7/32-in. diameter drill point eliminates need for center drilling or punching. The drill has a 4-degree lead on the flute, 0.006-in. radial relief, positive rake, an 0.002-in. clearance on the land. It is made of high speed steel, hardened to 63-64 Rockwell, and finish ground. It can be used in ½-in. portable drills, drill presses, and other spindle machines, with optimum speed of 500 to 600 rpm. • **Scully-Jones & Co.,** 1901 S. Rockwell St., Chicago 8, Ill.

For more details circle NED-403 G1 on enclosed inquiry slip

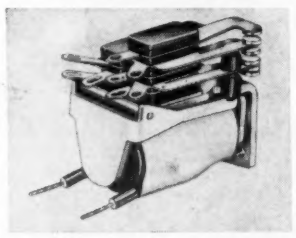
SELECTIVE PLATING TOOLS
for flat or convex surfaces



Any desired large flat or slightly convex surface can be electroplated readily with this line of selective plating tools, designed for use with Selectron "table-top" plating systems. Half-round flat, and large cylindrical plating styluses are available. In use, a cable is connected from the part to the power pack. A second cable is fitted with a stylus holding the graphite anode. Wrapped in cotton and saturated with a suitable electrolyte, the stylus is brushed over the area to be plated. Metal is deposited quickly to a precisely controlled thickness. • **Selectrons, Ltd.,** 520 Fifth Ave., New York 36, N. Y.

For more details circle NED-404 G1 on enclosed inquiry slip

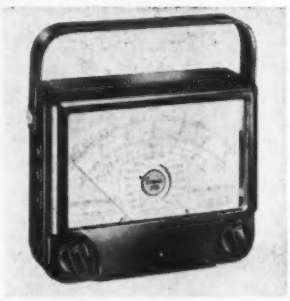
TELEPHONE TYPE RELAY
1¼-in. long unit weighs 1.5 oz



Up to four-pole double-throw contact combinations are carried by the Series 995 direct current telephone type relay. It is applicable to instrument control, business machines, mobile radios, and other products where space and weight are factors. Palladium contacts are rated at 150 w, 3 amp maximum; fine silver at 150 w, 1½ amp maximum; and platinum-ruthenium at 150 w, 3 amp maximum. Gold alloy is also available. Coil ratings range from 3 to 110 v dc. Relay is less than 1¼ in. long and weighs about 1.5 oz. It has standard lug type terminals, and is also offered with a hermetically sealed enclosure with plug-in or solder hook type terminal headers. • **Guardian Electric Mfg. Co.,** 1550 W. Carroll Ave., Chicago 7, Ill.

For more details circle NED-405 G1 on enclosed inquiry slip

VOLT-OHM-MILLIAMMETERS
have easy-to-read 7-in. meter



Production line testing where accurate, repetitive readings are required, plus general laboratory and electronic work, are applications for Model 267 and 268 volt-ohm-milliammeters. One switch selects range position and function simultaneously. Model 267 has eight ranges from 0-0.25 to 0-1000 v dc, six ranges from 0-2.5 to 0-1000 v ac, a 0-50-microamp range, six ranges from 0-1 to 0-500 ma dc, and a 0-10-amp dc range. Model 268 has six ranges from 0-3 to 0-1200 v dc and ac, a 0-60-microamp dc range, three ranges from 0-1.2 to 0-120 ma dc, and a 0-12-amp dc range. Alternating current output ranges range up to 250 and 300 v, respectively. Both models measure 6 x 7¼ x 3¼ in., have a 7-in. meter, weigh 3¼ lb, and cost $49.95. **Simpson Electric Co.,** 5200 W. Kinzie St., Chicago 44, Ill.

For more details circle NED-406 G1 on enclosed inquiry slip

work-O-matic handling system

offers you increased production at lower cost

Get the complete story on this cost-cutting material handling system by contacting The Union Metal Manufacturing Company, Canton 5, Ohio.

UNION METAL
Material Handling Equipment

For more details circle NED-40

FOR VOLTAGES OF 600 OR LESS

There's a *Safe and Dependa*
BUSS Fuse or FUSETRON F
to fit the needs of every use

1 Buss LOW-PEAK fuses. 200,000 amp. interrupting capacity . . . great current limitation . . . plus long-time-lag. **Bulletin LPCS.**

2 FUSETRON dual-element fuses. All purpose protective device for circuit, motor or equipment protection. **Bulletin FIS.**

3 Buss Hi-Cap fuses. For loads above 600 and up to 6,000 amps. 200,000 amp. interrupting capacity, plus current limitation. **Bulletin HCS.**

4 Buss LIMITRON fuses. High interrupting capacity fuses with exceptional current limitation. **Bulletin HLS.**

5 Buss Super-Lag Re est cost protection where are expected.

6 Buss One-Time fuse tection for heating or l faults do not exceed 10,

7 Buss Clear Window body, safety design guar

8 FUSETRON dual-el Safely stop needless blow against short-circuits an

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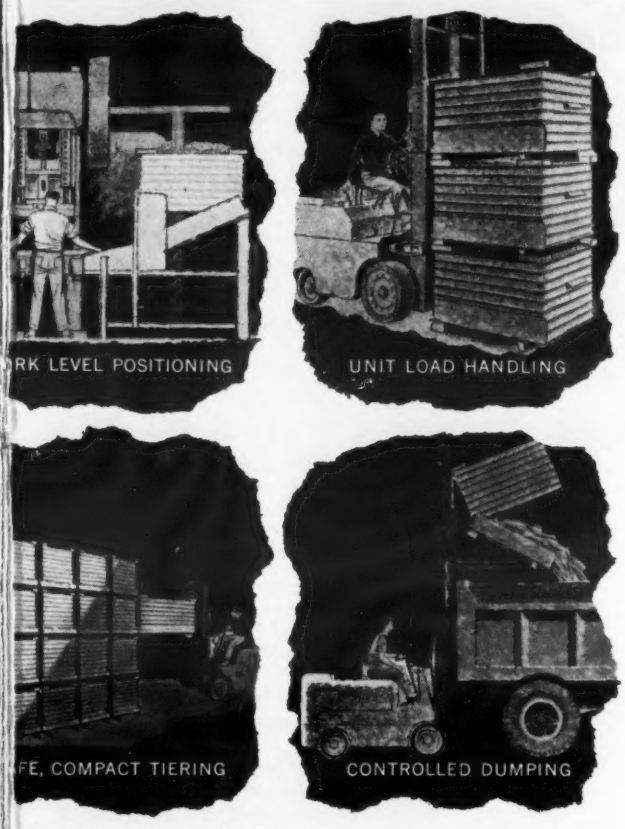
The Authorized S

For more details circle NED-40



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newable fuses. Low- periodic short-circuits **Bulletin RCS.**

s. Low cost, safe pro- ighting circuits where 000 amps. **Bulletin NCS.**

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9 Buss FUSTAT fuses. Fusetron fuses with type "S" base resist overfuseing or tampering. **Bulletin SCPS.**

FUSTATS for motor protection. **Bulletin SMPS.**

10 BUSS and FUSETRON Small Dimension fuses and fuseholders. For the protection of all types of electric and electronic devices. **Bulletin SFB.**

Get the Facts, Write...

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G1 on enclosed inquiry slip ▲

KF *Distributor carries a full line of bearings*

He can give you immediate delivery of almost any bearing—because he carries all types in countless sizes in his local stocks.

And if he should be "out," there's a nearby SKF regional warehouse that is completely stocked to back him up. So, why not consider his full line as your inventory and call him first? 5904

SKF MOTION ENGINEERING

Advanced ball and roller bearing technology

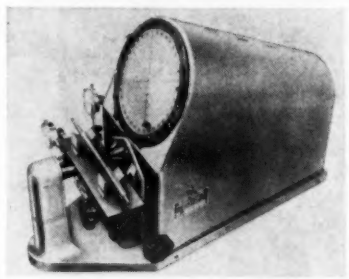
G1 on enclosed inquiry slip ▲

AIR COMPRESSOR
four-cylinder, single-stage type

V-belt or any suitable electric motor, gasoline engine, or power take-off supplies power for the Airmaster 75 single-stage air compressor. Four cast iron cylinders have large area, low lift steel valves air cooled by a high velocity fan type flywheel. It delivers 75 cfm of air at 100 psi, sufficient for operating a hand-held rock drill, 80-lb paving breaker, or 1/4-in. sand blast nozzle. Positive-pressure gear pump lubrication and a finned after-cooler are standard. Models are available with base mounting and a portable trailer mount. • **Emglo Products Corp.,** 116 DuPont St., Johnstown, Pa.

▲ For more details circle **NED-410 G1** on enclosed inquiry slip ▲

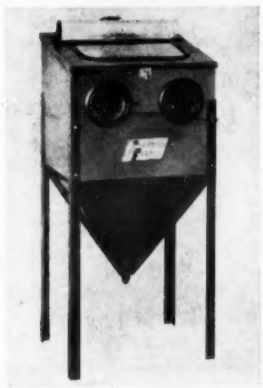
OPTICAL COMPARATOR
has 8-in. diameter chart



Non-radial lines do not appear bent when viewed on this portable optical comparator. It weighs only 35 lb and is designed to eliminate distortion and afford reliable readings at any point on the screen. Other features are a 20X antistigmatic colored-corrected lens system, a 3 x 10-in. measuring stage with slot for all optical staging equipment, and a 0 to 180-degree vernier scale. The 8-in. diameter ground glass chart has 0.005 to 0.150-in. radius lines, plus 45 and 60-degree lines. • **Rankin Bros. Engineering & Sales, Inc.,** 11090 S. Alameda St., Lynwood, Calif.

▲ For more details circle **NED-411 G1** on enclosed inquiry slip ▲

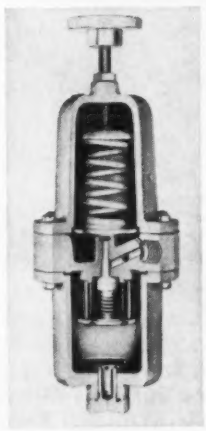
BLASTING & PEENING MACHINE
cleans parts, tools, and castings



A 1½-hp compressor and a 60-gal tank are adequate for performing most cleaning operations with the Perfecto-Peen Model DV100 dry blasting and peening machine. Air required is only 60 psi minimum and 15 cfm. Machine accommodates 5 to 6 lb of abrasive material per loading for cleaning hand tools, parts, valves, castings, engine components, and almost any other piece that will fit in the cabinet. Its work area is 23 in. wide and 15 in. deep. Operation is on 110 v ac. Optional equipment includes a fixed gun attachment stand, foot operated valve, and dust blow-off gun. Price is $189.60. • **Aero-Test Equipment Co.,** Perfecto-Peen Div., 8401 Chancellor Row, Dallas, Tex.

▲ For more details circle **NED-412 G1** on enclosed inquiry slip ▲

AIR FILTER-REGULATOR
has high capacity to drop ratio



One-piece pressure reducing and relief valve that provides a tight dead end shut-off is incorporated in the Type 467 Airset air filter-regulator. At 100-psi inlet pressure and 20 psi outlet pressure, its capacity is 14.75 cfm with only a 1-psi drop. Maximum inlet pressure is 150 psi. Available in four ranges from 0 to 125 psi, unit's inner valve is made of high tensile strength, abrasion resistant Delrin 500 which has the resiliency to provide a tight sealing soft seat. A 40-micron cylindrical filter of phenolic-resin-impregnated cellulose is unaffected by contaminants common to pneumatic systems. It is cleaned with gasoline, kerosene, or similar solvent. • **Kieley & Mueller, Inc.,** 64 Genung St., Middletown, N. Y.

▲ For more details circle **NED-413 G1** on enclosed inquiry slip ▲

NEW ABRASIVE BELT SWING FRAME GRINDER

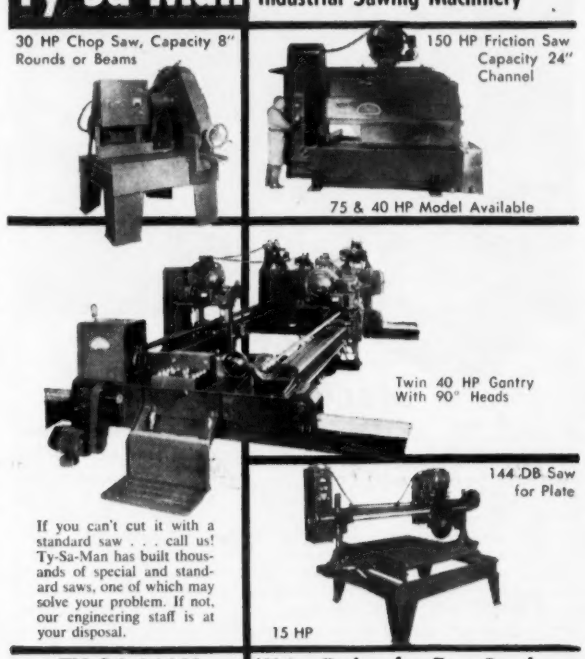
CURTIS MODEL PB-A

Adaptable to a wide variety of operations in large or small plants, can be used as a portable unit and brought to heavy work, or rigidly mounted for many grinding and polishing operations. 10 or 7½ hp. motor, heavy-duty contact wheel design, center post tracking mechanism, automatic belt tensioning, precision roller bearings. For additional information, write to: Curtis Machine Division, The Carborundum Company, Niagara Falls, New York.

CARBORUNDUM

▲ For more details circle **NED-414 G1** on enclosed inquiry slip ▲

Ty-Sa-Man America's Most Complete Line of Industrial Sawing Machinery



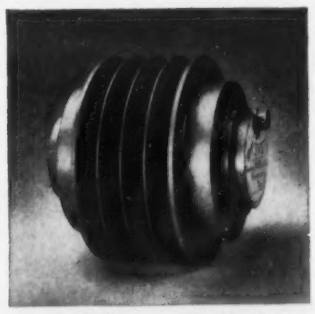
If you can't cut it with a standard saw . . . call us! Ty-Sa-Man has built thousands of special and standard saws, one of which may solve your problem. If not, our engineering staff is at your disposal.

TY-SA-MAN MACHINE COMPANY, Inc.
550 White Avenue
Knoxville 1, Tennessee

Write Today for Free Brochure

A brochure pictures and describes the functions of many metal saws. If you have a cutting problem, write or call today.

▲ For more details circle **NED-415 G1** on enclosed inquiry slip ▲



New Variable speed sheave won't freeze, needs no lube

Wood's new "SVS" stationary control, multiple groove sheave has positive locking collars which eliminate fretting corrosion, freezing and sticking. It needs no lubrication . . . permits accurate, simple and infinitely variable speed control . . . is easily installed, accurately balanced to assure smooth operation and long drive life . . . uses standard v-belts and stock companion sheaves. Drive range is from 10 to 150 hp. SVS/960

Wood's *write for bulletin 6102*

T. B. WOOD'S SONS COMPANY
CHAMBERSBURG, PENNSYLVANIA

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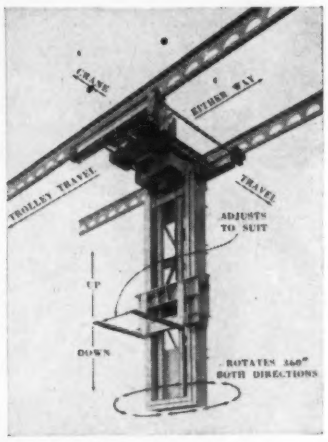
CLEVELAND TRAMRAIL

STACKER CRANES

HANDLE 3 TONS MAKE HIGH LIFTS



Efficient materials handling and maximum use of storage space are obtained with Cleveland Tramrail stacker cranes.

They are built as simple or mechanized as work requires. Telescoping type, illustrated, clears over trucks, railroad cars, etc., when in raised position. Stacker cranes are available for floor or cab operation.

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6658 East 285th St., Wickliffe, O.

CLEVELAND TRAMRAIL

For more details circle NED-417 G1 on enclosed inquiry slip

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Hoffman Bit cores through high density alumina in seconds.

Large matrix with heavy diamond concentrate assures long, low cost coring.

OUTPERFORMS • LASTS LONGER • COSTS LESS

Hoffman Glaceram Bits are highly efficient over the widest range of industrial applications in coring extremely hard materials. Their special design assures better than "three-to-one" bit life for drilling or finish grinding glass, ceramics, quartz, flint, porcelain, etc. . . . even where face widths are as low as .025". Hold original O.D. or I.D. accuracy for life of the bit. In 1/8" to 2 7/8" diameters.

Write for Literature and prices. Ask about Free materials tests.

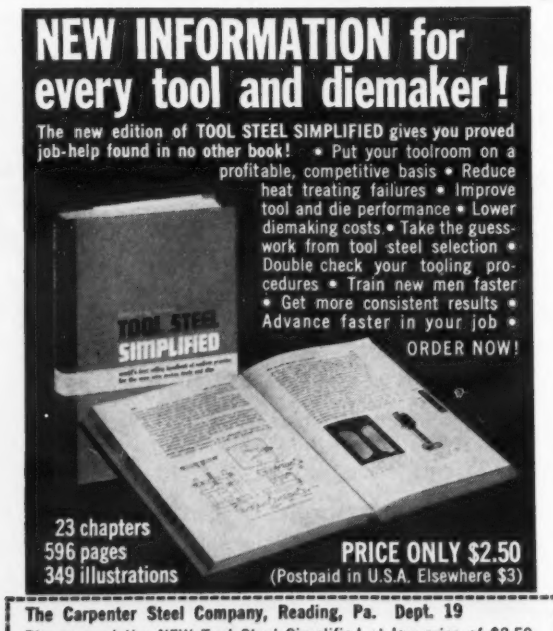
Diamond Tool Experts Since 1902

HOFFMAN BROS. DRILLING CO.
106 Cedar Street • Punxsutawney, Penna.

For more details circle NED-418 G1 on enclosed inquiry slip

NEW INFORMATION for every tool and diemaker!

The new edition of TOOL STEEL SIMPLIFIED gives you proved job-help found in no other book! • Put your toolroom on a profitable, competitive basis • Reduce heat treating failures • Improve tool and die performance • Lower diemaking costs • Take the guesswork from tool steel selection • Double check your tooling procedures • Train new men faster • Get more consistent results • Advance faster in your job • ORDER NOW!



23 chapters
596 pages
349 illustrations

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Please send the NEW Tool Steel Simplified at low price of $2.50. Check or money order enclosed.
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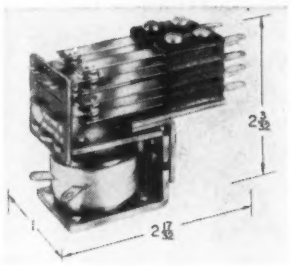
Company_____
Address_____
City_____ Zone_____ State_____
(please print)

For more details circle NED-419 G1 on enclosed inquiry slip

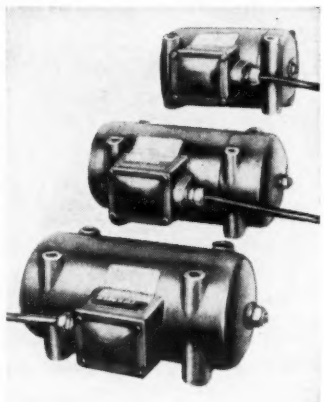
MEDIUM POWER RELAY
for up to 1/2-hp ac or dc loads



The GF Series low-cost 15-amp relay for general purpose switching will handle a wide range of ac and dc loads. Relay has long bronze contact arms which provide ample contact overtravel, resulting in good wiping or self-cleaning action. Contact arrangements range from single-pole single-throw to four-pole double-throw with 1/4-in. silver contacts rated 15 amp at 115 v ac or 28 v dc. Coils operate on 6 to 230 v ac or 6 to 110 v dc. • **American Machine & Foundry Co.**, Potter & Brumfield Div., 270 N. Main St., Princeton, Ind.

For more details circle NED-420 G1 on enclosed inquiry slip

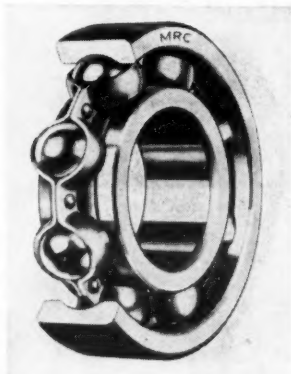
HEAVY DUTY VIBRATORS
impacts range from 500 to 1400 lb



Bearing strain is minimized in these improved heavy duty electric external vibrators by shortening the shafts. Available in three sizes delivering impacts of 500 to 1400 lb, they are used on bins, chutes, screens, railroad cars and other equipment requiring shaking action. These noiseless, totally - enclosed, electric units are merely attached to the equipment and plugged into an electric power source. • **Tremix Co.**, 94 Henry St., Binghamton, N. Y.

For more details circle NED-421 G1 on enclosed inquiry slip

BALL BEARINGS
stainless steel line is expanded



Stainless steel ball bearings are available for use in corrosive environments, under conditions where lubrication is marginal or nonexistent, or in high temperatures. Units in the expanded line are dimensionally and functionally interchangeable with bearings made of conventional materials. Rings and balls are made from martensitic stainless steels and are hardened to 60-63 Rockwell C. Ball cages are ordinarily pressed from Grade 302 stainless steel, but machined cages of other corrosion resistant materials can be specified. Grade 302 stainless steel shields or nitrile synthetic rubber Synthe-Seals retain lubricant and protect against contaminants in raceways and rolling elements. • **Marlin Rockwell Corp.**, Box 280, Jamestown, N. Y.

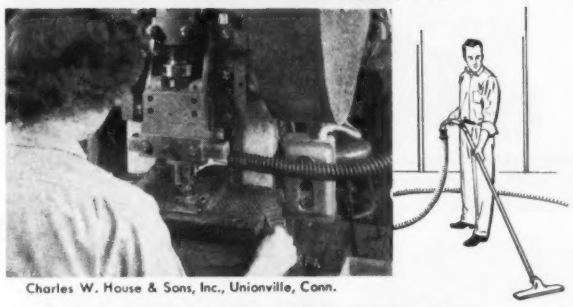
For more details circle NED-422 G1 on enclosed inquiry slip

MICROFILM READER-PRINTERS
make 18 x 24 and 9 x 14-in. prints

Versatile Micro - Mate and Micro-Mate Jr. microfilm reader-printer-copiers will make up to 18 x 24 and 9 x 14-in. prints respectively, from either 16 or 35-mm microfilm transparencies, strip film, or IBM card mountings. Prints are made in about 10 sec and dry in less than 1 min at room temperatures. They are made from copy of any color. Units comprise a projector, easel, processor, and automatic timer and are priced at $695 for the Micro-Mate and $395 for the Jr. model. They can serve as standby office copiers since they can copy typed or printed material, sketches, or illustrations. • **Federal Mfg. & Engineering Corp.**, 1055 Stewart Ave., Garden City, N. Y.

For more details circle NED-423 G1 on enclosed inquiry slip

Here... a SPENCER VACUUM SYSTEM DOES DOUBLE DUTY



Charles W. House & Sons, Inc., Unionville, Conn.

Here, dual use of a single, **built-in** vacuum system saves money and improves efficiency by:
SPEEDING PRODUCTION—As felt washers are stamped out, vacuum picks them up, cleans them as they are conveyed to containers.
SIMPLIFYING MAINTENANCE—Cleaning is quick and thorough, there's no recirculation of dust or lint.
Write for information on how Spencer vacuum can solve **your** production, conveying or maintenance problem.

Request Catalogs No. 155B and No. 143-B

The SPENCER TURBINE COMPANY
HARTFORD 6, CONNECTICUT

For more details circle NED-424 G1 on enclosed inquiry slip

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391 Standard Models To Choose From PLUS Complete Facilities To Design And Manufacture Special Ventilators

BURT VENTILATOR	TYPE	CAPACITY (CFM)	SIZES	MODELS	DISCHARGE
FREE-FLOW GRAVITY	Gravity	113 to 35,560	16	16	Upward
LO-HYT GRAVITY	Gravity	AS REQUIRED	18	18	Downward
MONITOR	Gravity	MADE TO ORDER		1	Upward
MONOVENT (Ridge)	Gravity	48 to 5,184	15	15	Upward
REVOLVING	Gravity	123 to 10,931	17	17	Sideward
STANDARD GRAVITY	Gravity	35 to 24,890	19	19	Upward
THERMAVENT	Gravity	MADE TO ORDER		2	Upward
CENTRIFLOW	Power	65 to 36,430	56	184	Downward
FREE EXHAUST FAN	Power	5,000 to 75,550	7	17	Upward
FREE FLOW FAN	Power	1,040 to 99,050	15	35	Upward
LOW TYPE	Power	337 to 47,400	15	60	Downward
STANDARD FAN	Power	685 to 15,000	10	10	Upward

There is a type of Burt Ventilator to meet any ventilating problem that Roof Ventilators can solve. Burt's specialized engineering, equipment and craftsmanship — from 60 years of designing and building ventilators — is your assurance of complete satisfaction. Cost economies are assured from almost 400 *standard* models that are quickly available.
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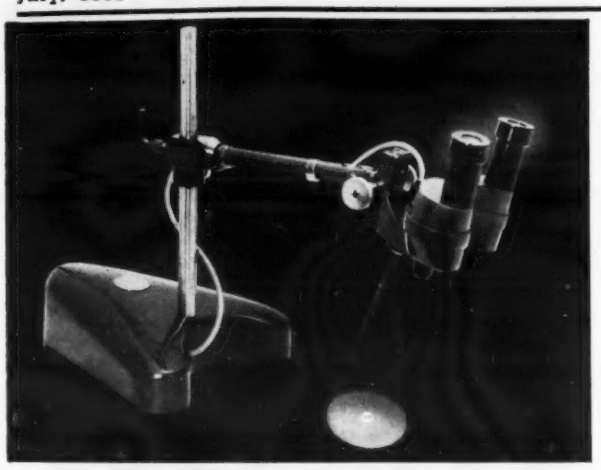
MEMBER AIR MOVING & CONDITIONING ASSOCIATION, INC

For more details circle NED-425 G1 on enclosed inquiry slip



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Stable base with universally adjustable mounting
Fixed magnification 10X and 20X models each **$165**

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91 WAITE STREET, MALDEN 48, MASSACHUSETTS
IN CANADA: 77 GRENVILLE STREET, TORONTO

For more details circle NED-426 G1 on enclosed inquiry slip

NOW... low-cost barrel finishing with NEW ALMCO ROLL BARRELS!

● Better product parts through use of modern barrel finishing can now be yours . . . *at a fraction of previous time and cost!*

New low-cost ALMCO Supersheen Roll Barrels provide greater deburring and finishing capacity in less floor space than do small standard barrels . . . and they're more adaptable, too.

Roll Barrel System shown above, for example, includes Multi-Roll "36", Multi-Roll "78", time-saving loading cabinet, and easy-to-use hoist boom. Nine different barrel sizes provide wide range of speeds and capacities. Using only one barrel or many, one man operates entire system.

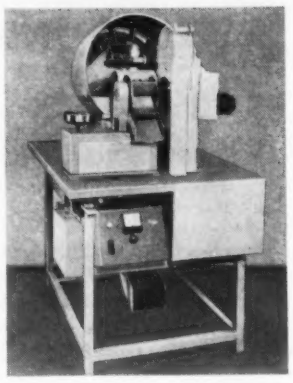
For Full Story on Roll Barrel Systems and on processing sample parts, write for ALMCO Album of New Products...*today!*

FREE!
NEW PRODUCT ALBUM
Gives full information on new Almco Supersheen Systems. Describes new and better machines, methods and media. Write today!

ALMCO
QUEEN PRODUCTS DIVISION
of
King-Seeley Thermos Co.
177 Marshall St.
Albert Lea, Minnesota

For more details circle NED-427 G1 on enclosed inquiry slip

AUTOMATIC PARTS COUNTER handles 450,000 small items hourly



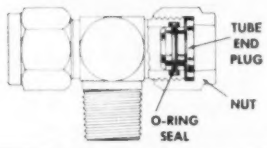
Paper clips, ball bearing assemblies, fasteners, and drug capsules are typical mass-produced items which can be bulk counted and batched in small lots by Model 620 automatic parts counter. Machine affords quick change-over in counting different parts and will handle 450,000 items per hour. It consists of a revolving hopper into which incoming parts are poured, an adjustable volume measuring cup, rapid-weighing electronic scale, count indicator, output chute, and a conveyor start-stop control. Acceptance limits can be preset to allow any deviation up to ± six pieces. Exact count of 10,000 average-size pieces can be achieved in about 5 min of unattended operation. ● **Atronic Products, Inc.**, Union Hill, West Conshohocken, Pa.

For more details circle NED-429 G1 on enclosed inquiry slip

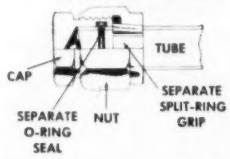
O-RING PLUG & CAP for fittings and tube ends

Designed to close off the tube end of split-ring grip tube fittings, this O-ring seal (top drawing) goes inside the fitting in place of the tube. The shoulder of the nut holds and grips the plug separately from the seal. The O-ring seal cap (bottom) closes off the end of a tube, sealing it separately from the split-ring grip. The higher the pressure the stronger the grip and tighter the seal. Installation requires no flaring, threading, or soldering, and the tube need not be cut square. Both quickly installed, reusable units are available in sizes for ¼ to 2-in. OD tube. ● **Lenz Co.**, 3301 Klepinger Rd., Dayton 1, Ohio.

LENZ "O-RING SEAL" PLUG FOR TUBE END OF FITTINGS



LENZ SEPARATE SEAL AND SEPARATE GRIP TUBE CAP



For more details circle NED-430 G1 on enclosed inquiry slip

How a Magnetic Clutch Works

FREE Vickers Inc., Electric Products Div.—"How a Vickers Magneclutch Works" is the title of 6-page illustrated Bulletin 6005-2. The Magneclutch is a dry magnetic particle clutch which provides flexible, easily-regulated torque control without chatter, grab, or wear. Cross-section drawings and charts give additional information.

For more details circle NED-431 G1 on enclosed inquiry slip

COLD IMPACT EXTRUSIONS

Typical Extrusions

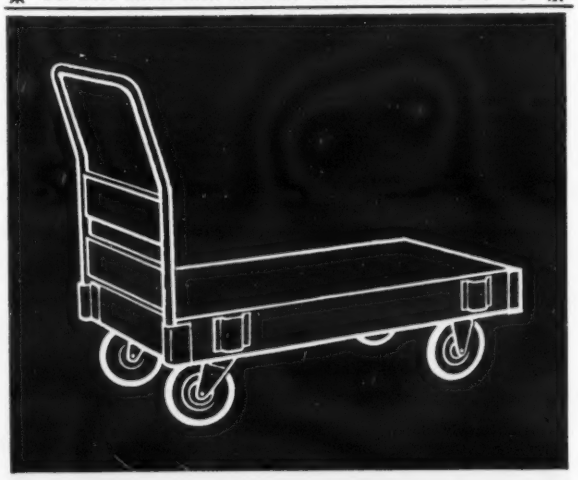
In steel, brass, aluminum and stainless steel.
Material savings, through moving rather than removing metal, and higher strength gained through cold working result in substantial economies in high production items, such as, bearing races, fittings, cylinders, shells, etc.

JACOBSON NUT MFG. CORP.
Kenilworth, New Jersey

For more details circle NED-433 G1 on enclosed inquiry slip

Available in Stainless Steel, Brass, Aluminum and Steel
JACOBSON NUT MFG. CORP. KENILWORTH, N.J.

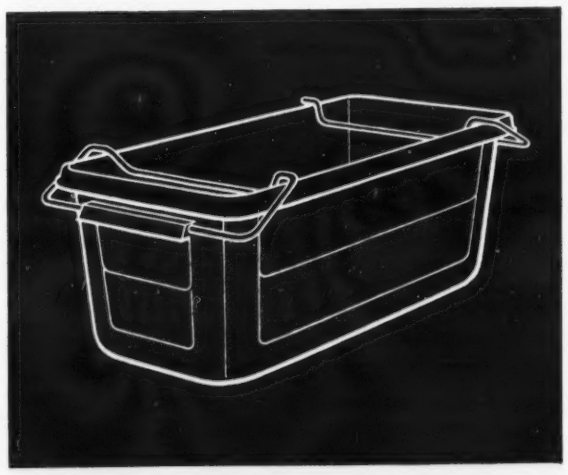
For more details circle NED-434 G1 on enclosed inquiry slip



Let wear-ever move it

Even the women in your plant can handle lightweight Wear-Ever aluminum trucks. This newest addition goes like lightning, yet stands up to long, hard use. One-eighth-inch thick, heavy-duty aluminum base. Eight-inch diameter rubber-tired casters roll smoothly over uneven floors. Special panels (two sides, one end) turn 47" x 23" flat bed truck into a panel truck. Send reply card for full details on this and other Wear-Ever trucks; or write Wear-Ever Aluminum, Inc., New Kensington, Pa. Immediate delivery. A-5440-3

For more details circle NED-428 G1 on enclosed inquiry slip



Let wear-ever store it

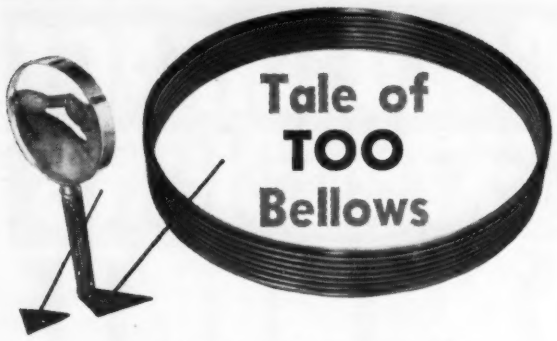
Common-sense design, that's where Wear-Ever shines. For example, Wear-Ever makes tote boxes with special handles that permit stacking when full—nesting when empty. After that you have Wear-Ever's superior construction going for you. Extra-heavy-gauge aluminum alloy, no seams to catch parts (or dirt). Wear-Ever stocks popular sizes with dollies to fit—for immediate delivery. Send reply card for full details on these and other rectangular containers; or write Wear-Ever Aluminum, Inc., New Kensington, Pa. A-5440-5

For more details circle NED-432 G1 on enclosed inquiry slip

Let wear-ever keep it handy

Save amazing amounts of time. Keep parts or material at workers' finger tips in Wear-Ever mobile bins. Round, square—27-, 30-, 38- and 50-gallon capacity—all made of tough, nonsparking aluminum alloy. No seams or crevices to collect dirt (or small parts). Hard rubber wheels or casters for long wear. Send reply card for full details; or write Wear-Ever Aluminum, Inc., New Kensington, Pa. Immediate shipment from stock. A-5440-1

For more details circle NED-435 G1 on enclosed inquiry slip



Job **too big** for a bellows? Or **too small?**

Not on your life. Check your Robertshaw catalog for bellows properties and capabilities: wherever metal flexibility or response to pressure is concerned, a **bellows** can furnish the answer.

We invented the seamless metal bellows; and we still make the best . . . for an unlimited variety of applications. Make them of stainless steel, beryllium copper, monel, inconel and many other metals, depending on characteristics desired.

Get the complete Robertshaw Bellows story and product data in Catalog NY-R.

Robertshaw
Robertshaw-Fulton Controls Company

FULTON SYLPHON DIVISION, KNOXVILLE 1, TENNESSEE

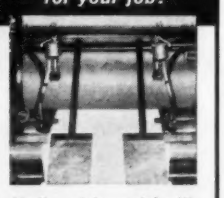
▲ For more details circle **NED-436 G1** on enclosed inquiry slip ▲

GPE Controls

WEB and STRIP GUIDES

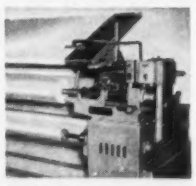
Save TIME...MONEY...MATERIAL!

43 MODELS
...one just right for your job!



Medium-duty model with air sensing, positioning knives on rubber calender.

Photoelectric reflected light head following line on printed carton stock to eliminate slitting.



Light-duty unit with air sensing, applied to textile machinery.

Send for NEW Catalog EG-84

Photos and diagrams representing thousands of installations; complete details on world's broadest line of web and strip guides.

- **Laminate without trim!**
- **Speed up presses while you keep accurate side register!**
- **Slit without side trim!**
- **High-speed textile tentering with minimum selvage.**
- **Track conveyor belts, abrasive belts, etc., up to 5,000 feet per minute.**
- **Winds 100-ton steel coils evenly to protect edges.**
- **Web edge position, porosity, opacity, or reflectance sensed by air or photoelectric heads.**
- **Non-clog air sensing head (patented) never touches web, works perfectly with linty, dusty, or abrasive webs.**
- **Hydraulic actuation for unlimited power and speed, high frequency response.**
- **Engineered by specialists in industrial automatic controls.**

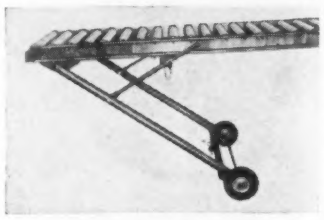
GPE Controls, Inc.
258 E. Ontario St., Chicago 11, Ill.

GPE Controls | GP

A subsidiary of General Precision, Inc.

▲ For more details circle **NED-437 G1** on enclosed inquiry slip ▲

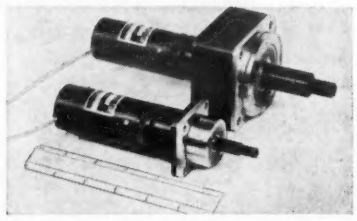
CONVEYOR WHEEL STAND
facilitates moving and setup



Lightweight portable, gravity, or belt Hytrol conveyors are moved about and set up easily with the help of this wheel stand attachment. Operator rolls the conveyor like a wheelbarrow to the storage area or another job site. Stand is adjustable in height and folds against conveyor for compact storage. It has welded steel frame and braces, and heavy-duty locks on the wheels for conveyor stability. • **Hytrol Conveyor Co.,** 1959 S. 54th St., Milwaukee 19, Wis.

▲ For more details circle **NED-438 G1** on enclosed inquiry slip ▲

PLANETARY GEARMOTORS
offered in 18 reduction ratios



Up to 500 lb-in. of torque at 8 rpm continuous duty and up to 1000 lb-in. for intermittent use are provided by these planetary gearmotors. They use 1½-in. precision motors and are available in 18 reduction ratios from 1.87:1 to 941:1. When used with 3-in. square mounting flange, ten ratios from 219:1 to 5211:1 are available. Ball bearings are used at all bearing locations. Gearbox rating is 1/10 hp. Selection of the proper motor mounting affords virtually any desired speed reduction. Hardened output shaft has 18 tooth serrations. Length and weight vary with type of unit and ratio. • **Globe Industries, Inc.,** 1784 Stanley Ave., Dayton 4, Ohio.

▲ For more details circle **NED-439 G1** on enclosed inquiry slip ▲

VARIABLE STROKE CYLINDER
output is proportional to stroke

Precise programming and automatic repetition of variable speed and length stroke operations are possible with the 80-Series electro-hydraulic cylinder. When lead through any series of strokes needed for a given operation, it develops proportional electrical signals for recording on attendant equipment. The cylinder will then accurately and repeatedly duplicate the operation on command. It can be mounted singly or compounded to obtain any work position. Cylinder is especially suited for automating repetitive manual operations such as press feeds, parts removal, clamping, indexing, and tool actuation. The output signal can also be used to control remote cylinders which operate dampers, valves, chutes, or levers. A wide range of stroke lengths, bore sizes, and rod end mountings is available. • **Guerin Engineering, Inc.,** 23255 Woodward Ave., Ferndale 20, Mich.

▲ For more details circle **NED-440 G1** on enclosed inquiry slip ▲

AIR CHUCK
workpiece passes through center

Jaws of this self-contained air chuck are activated by applying air through its inlet valve on the chuck body. When the air supply is removed, air pressure is retained inside the chuck housing during machining operations. The workpiece can be passed through the center of the chuck which requires no permanently attached air supply lines. The chuck is allowed to rotate, move axially, or travel in any manner with the machine on which it is used. All jaws move equally and simultaneously and are self-centering within ±0.002 in. Standard models have a ⅞-in. movement per jaw. Sizes from 12 to 48-in. ID may be used as a rotating or stationary chucking device in a horizontal or vertical position. • **Mollenberg-Betz Machine Co.,** 20-26 Henry St., Buffalo 2, N. Y.

▲ For more details circle **NED-441 G1** on enclosed inquiry slip ▲

Increase efficiency—reduce cost with

FLO-TRONICS AIR CONVEYING

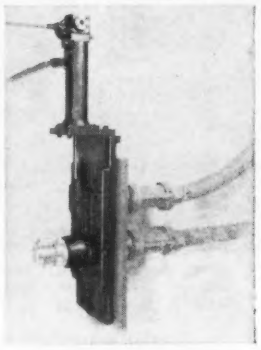
Systems and Equipment

Flo-Tronics complete air conveying systems and system components are designed to meet your specific requirements. Systems include complete automatic controls. Equipment is available as standard, in cast iron, chrome-plated, Ni-Resist and stainless steel construction.

NEW "FLO-SEAL" LINE DIVERTER

Air operated, solenoid piloted "Flo-Seal" Line Diverter provides remote, automatic selection of two conveying lines. Surface-to-surface contact of the ground and polished slide on a stationary shoe insures maximum sealing area and provides air-tight operation. Ideal for "on stream" line switching—self cleaning operation with no areas for product accumulation. No seals or lubricants required. Dismantle for service or inspection in 60 seconds. Available in 1½ inch through 10 inch conveying line sizes.

Flo-Tronics engineers are anxious to assist you with your air conveying problems. Write today for "Flo-Seal" Line Diverter product sheet and air conveying systems brochure. No obligation of course.



FLO-TRONICS, INC.
Air Conveying Division
1430 Zarthan Avenue
Minneapolis 16, Minnesota

▲ For more details circle **NED-442 G1** on enclosed inquiry slip ▲

3½" CHART AND BLUEPRINT READER*

Power	Battery	Plug-in
3x	9.50	11.50

Supporting Stand 15.00
Plug-in Model with stand 26.50

NON-ACROMATIC*

Power	Battery	Plug-in
5x	10.95	12.95
7x	14.85	16.85

ACROMATIC*

Power	Battery	Plug-in
4½x	23.95	26.10
7x	27.50	29.50

WIDE FIELD TUBE AND SHOP MICROSCOPE*

Power	Battery	Plug-in
20x	64.65	66.85
40x	98.70	100.80

POCKET MICROSCOPE
Non Illuminated
40x, 50x, 60x with Leather Case 17.50

POCKET MAGNIFIER
10x Battery only 8.95 with leather case 13.95

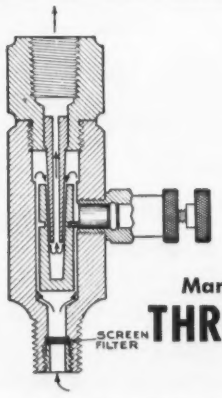
Textile Counting Plates - $1.00 Henry Disc. - $10.00 Battery Disc - $10.00

**All electric and battery handles - other parts are interchangeable—phone or write for catalog or contact your local dealer*

E. W. PIKE & CO., INC.
577 Pennsylvania Ave. • Elizabeth, New Jersey • EL 2-0630

▲ For more details circle **NED-443 G1** on enclosed inquiry slip ▲

MARSHALLTOWN



Reduce Pulsation with a
Marshalltown THROTTLER

Protect your gauges from pulsation, regardless of the viscosity or surface tension. Marshalltown Throttler employs the variable restricted orifice principle and will operate in either horizontal or vertical position.

Let Marshalltown answer your needle valve, gauge or thermometer problems . . . write for information and prices.

Gauges

MARSHALLTOWN MANUFACTURING, INC.
A Subsidiary of The Electric Autolite Company
Marshalltown, Iowa

▲ For more details circle **NED-444 G1** on enclosed inquiry slip ▲

New PDQ
MODULAR MANIFOLD BASE

Save space! Gang already-compact Hunt ½ in. PDQ valves on modular-manifold bases! Mount two or more valves in a single, space-saving assembly . . . simplify piping and wiring . . . cut installation costs.

Electrical connections are plug-in . . . PDQ bayonet-lock design allows valve replacement in just 30 seconds! Cylinder ports side and bottom tapped, ⅜, ½ or ¾ in. NPT; through ports tapped ends and bottom, supply—1 in. NPT, exhaust and conduit ports—1¼ in. NPT; meets JIC Standards.

Ask your nearby Hunt representative to show you the advantages of modular manifold base-mounted PDQ valves.

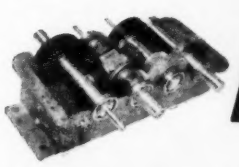
For more information, write for Bulletin 602. Address Hunt Valve Company, Salem, Ohio, Dept. NED-761

3013

HUNT
QUICK-AS-WINK® AIR AND HYDRAULIC
VALVES
HUNT VALVE COMPANY • DIVISION OF IBEC • SALEM, OHIO

For more details circle NED-445 G1 on enclosed inquiry slip

DIFFERENTIAL
SPECON GEAR BOXES



Differential assemblies precision crafted by Specon for drives and transmissions are available as gear boxes alone. These task-proven assemblies offer the built-in advantages of Specon units: extreme accuracy, low maintenance, rugged, space saving construction. Seven basic models are rated from 1 hp. to 75 hp. Specials and units for higher power can be supplied. The Specon units are particularly well suited for such applications as phase and register control, speed control, torque dividing, overriding, cycling and balancing operations.

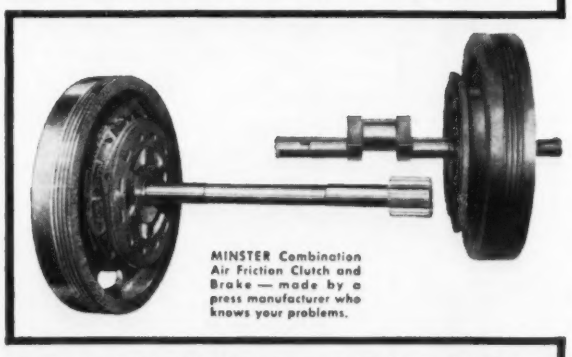
For full information on Specon gear boxes, drives and transmissions, write to:

STRATOS®
A DIVISION OF FAIRCHILD ENGINE AND AIRPLANE CORPORATION
Industrial Products Branch, Route 109, West Babylon, L. I., New York

For more details circle NED-446 G1 on enclosed inquiry slip

TO INCREASE PRESS EFFICIENCY

MINSTER CLUTCHES FOR PRESS CONVERSIONS



Here's why it is profitable to convert to Minster Clutches:

- Eliminates down time because of clutch failure
- Reduces maintenance by eliminating costly and frequent parts replacement
- Increases die life because of smooth, shock-free clutch engagement
- Reduces operator fatigue and improves safety because press is easier to operate, easier to control
- More productive cycles per hour on single cycle operation
- Easier, more rapid die setting

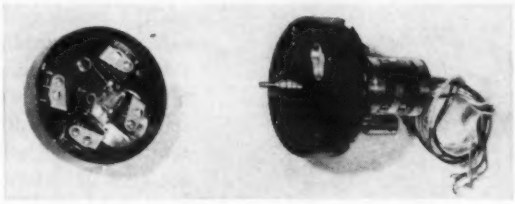
Bulletin CC 57 describes Minster Clutches for press conversion. Copy by request on company letterhead.

THE MINSTER MACHINE COMPANY
MINSTER, OHIO

For more details circle NED-447 G1 on enclosed inquiry slip

GEAR BOX MECHANISM incorporates Class 3 gearing

Actuating Micro Switches for regulating and recording temperature sources are contained in this precision gear box mechanism. One revolution of the poten-



tiometer corresponds to a 100° C reading on its face dial. Special gearing gives nonlinear motion to the dial at certain critical temperatures for accuracy and ease of reading. Unit is made of stainless steel with a black anodized aluminum housing for the Class 3 gearing. • **Humphrey Gear Mechanisms, Inc.,** 20-02 Utopia Parkway, Whitestone 57, N. Y.

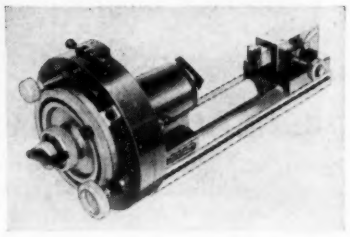
For more details circle NED-448 G1 on enclosed inquiry slip

MOBILE TOOL CABINET one to four-drawer models offered

Easily moved about on its 2½-in. diameter caster wheels, this heavy-duty tool cabinet is designed for cumbersome tools and equipment used to set up and maintain production machinery. Cabinet measures 34 x 24 x 18 in., is finished in green baked enamel, and has four 23½ x 15 x 4¾-in. drawers, each of which can be padlocked. One, two, and three-drawer models are also available. • **Bay Products, Inc.,** 1801 W. Cambria St., Philadelphia 32, Pa.

For more details circle NED-449 G1 on enclosed inquiry slip

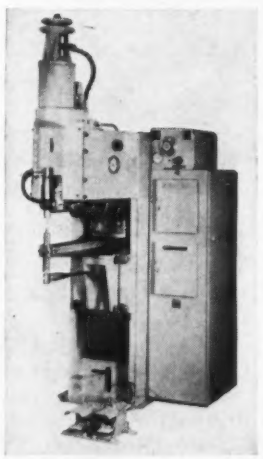
PRECISION INDEX CENTER used in inspection and machining



Precision form grinding of spiders, splined punches, gear die punches and dies, and sectional parts of dies is possible with this precision index center. It affords close tolerances in inspection work on centers, and in jig boring, milling, and jig grinding work on centers. Ball spindle with ±0.000005-in. tolerance under load, is designed to run true to 0.000015 in. TIR, and has four lapped-fit carbide plug-in stations. The extra plug-in station makes it possible to turn the workpiece exactly 180 degrees at any time to get work on dead center, or to re-orient for a different set of angles on the same workpiece. Unit has an accurately adjustable tailstock. Use in wet grinding is possible, as the mechanism is sealed. • **Moore Special Tool Co.,** 800 Union Ave., Bridgeport 7, Conn.

For more details circle NED-450 G1 on enclosed inquiry slip

RESISTANCE WELDING CONTROL automatically determines settings



As many as six variables of spot and projection welding are integrated into a single dial of the Calimatic resistance welding control. Adaptable to new or existing air operated machines, it eliminates set-up operations and contributes to weld standardization. Control automatically determines the proper settings for over 100 different material thicknesses and compositions. It is programmed by means of 120 studs in the front and rear faces of an aluminum drum which is keyed to the control dial shaft. Indexed to one of 30 settings, it establishes weld time, weld heat, tap selection, welding pressure, and other variables. • **Thomson Electric Welder Co.,** 161 Pleasant St., Lynn, Mass.

For more details circle NED-451 G1 on enclosed inquiry slip

Vulcathene® cuts corrosive drainage costs!

Now you can save big money—and avoid big trouble—this modern way of draining laboratory wastes.

You save *every* way with Vulcathene. Installs in a fraction of the time—at half the cost—of other drainage systems. (Patented Polyfusion® method makes leak-proof joints in *seconds!*) Save on longer, trouble-free, maintenance-free life, because Vulcathene is made of virgin polyethylene throughout—can't corrode, shatter, scale, or even clog with normal chemical wastes.

Find out more about this completely integrated drainage system—pipe, fittings, sinks, traps, in all standard sizes. Write Dept. 357 for catalog.

SEE OUR CATALOG IN SWEET'S OR WRITE FOR COPY

In Architectural, Industrial Construction and Plant Engineering Files of Sweet's

American Vulcathene
P.O. BOX 365 ROCHESTER 2, NEW YORK
DIVISION OF THE NALGE CO. INC.

For more details circle NED-452 G1 on enclosed inquiry slip

NEW FROM OVERLY

YOUR 1961 FIRE DOORATER
a complete guide to labeled metal fire door usage and labeled hardware — accurate technical data that will help you

SAVE INSURANCE COSTS
by decreasing the fire risks in your existing plant building.

SEND FOR YOUR COPY
of this booklet which illustrates over 90 different door styles, with fire-safety and life-safety requirements.

Overly
MANUFACTURING COMPANY
Greensburg, Pa. • St. Louis 19, Mo.
Los Angeles 39, Calif.

Overly Manufacturing Company
Greensburg, Pa.

Gentlemen:

☐ Please send me a copy of the 1961 Overly Fire Doorater.

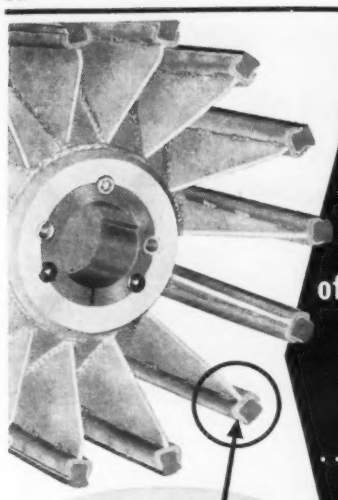
Name _____

Company _____

Street _____

City _____ State _____

For more details circle NED-453 G1 on enclosed inquiry slip



NOW!
• Positive Cleaning Action
• Less Wear of Conveyor Belts
AT THE
DRIVE .....END
with the NEW
"RUBBER LAGGED"
TURN-CLEAN PULLEY

WRITE FOR FREE SAMPLE

. . . And Full Information on How to Solve Difficult Drive Pulley Problems

VAN gorp MFG., INC. Dept. NED Pella, Iowa

For more details circle NED-454 G1 on enclosed inquiry slip

WHEREVER SOMETHING STICKS

Modern Packaging Engineers Use

IMS SILICONE FLUID SPRAY

WHEREVER ANYTHING STICKS TO METAL SURFACES—ON FILM SEALERS, CRIMPER JAWS, EMBOSSING ROLLS, PANS; STAMPING, FORMING DIES—MOLDS OF ALL KINDS

SIMPLY SPRAY ON THIS PURE SILICONE FLUID COATING
And your sticking problems are over!
The most economical way to apply costly Silicone Release Agents!
SAFE — NON-TOXIC
CLEAN — LONG LASTING
Handy Self Dispensing Can
Has No-Fumble, Speedy Spray Head

PRICES (Delivered)
Sample Can $2.00
Per Unbroken Dozen $18.00
Per Unbroken Gross $197.40

INJECTION MOLDERS SUPPLY CO.
17601 So. Miles Rd. Cleveland 28, O.

For more details circle NED-455 G1 on enclosed inquiry slip

ANOTHER WASSELL PRODUCT

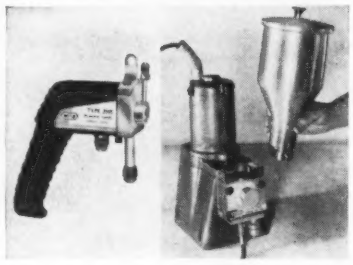
HOW TO KNOW IT ALL

Versatile Produc-Trol can give immediate and complete information on almost every phase of production. No recourse to files is needed; with Produc-Trol all the factors of efficient production are scheduled before your eyes — you have the right answer every time.

WASSELL ORGANIZATION, INC.
WESTPORT, CONNECTICUT

For more details circle NED-456 G1 on enclosed inquiry slip

PLASMA COATING SYSTEM
sprays many different materials with minimum porosity, high bond



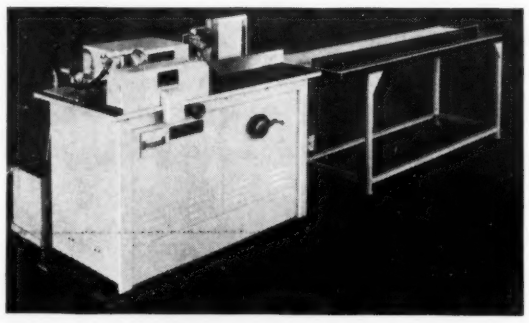
Improvements in control and flow of plasma powders permit exact duplication of castings applied by the plasma spray coating system. Flame spray application range is from 5 to 15 lb per hour with deposit efficiency of 65 to 80 per cent. System components are console, with automatic controls and fail-safe devices; powder feeder; and a simplified spray gun with one-piece nozzle and multipurpose electrode, both in fixed positions. The 3¼-lb hand operated or machine mounted gun is small enough to spray bores as small as 5-in. ID.

Nitrogen, argon, or helium are used as the plasma gas. Tap water is the coolant. Powder is fed at a constant knob controlled rate by a mechanical metering device. Aluminum oxide, chromium, cobalt, molybdenum, nickel, tungsten, zirconium silicate, and rare earth oxides are among the many materials with melting points exceeding 6100° F which can be applied with minimum porosity, and high bond and tensile strengths. • **Metco Inc.**, 1101 Prospect Ave., Westbury, L. I., N. Y.

For more details circle NED-457 G1 on enclosed inquiry slip

ABRASIVE CUTOFF SAW
5-hp unit cuts stainless steel

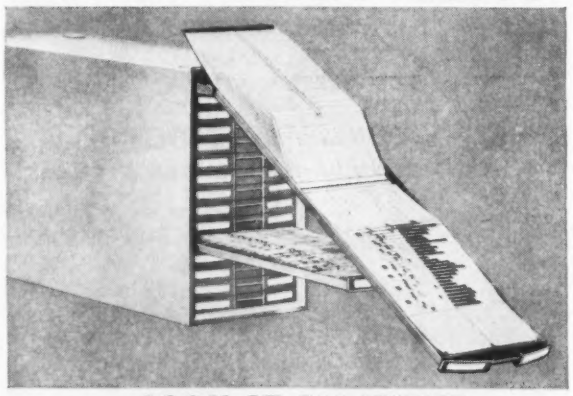
Precision cuts on such hard-to-cut materials as stainless steel are made with this abrasive cutoff saw. The 5-hp machine is equipped with an adjustable speed



wheel feed and a micrometer feed stock stop, as well as a liquid flood coolant system and settling tank. Model shown has manual feed and toggle clamping of stock and cutoff piece at the point of cut. Various types of automatic feed are available. In repeat cut tests on 2½-in. diameter titanium-bearing stainless steel bar, machine cut 0.045-in. thick discs, holding tolerances to less than ±0.002 in. Cutting time was about 27 sec. • **Rhode Island Engineering & Mfg. Corp.**, 570 S. Water St., Providence 3, R. I.

For more details circle NED-458 G1 on enclosed inquiry slip

ANOTHER WASSELL PRODUCT



LOOK AT ALL THREE

You'll find these exclusive advantages in Wassell Visible Sig-Na-Lok:
• Superior accuracy because signals lock in place — won't cause mistakes.
• Quicker alphabetical changes — because pockets **snap out, snap in.**
• Longer pocket life because pockets are bound full width — never tear.

Wassell Visible Sig-Na-Lok streamlines your records on inventories, maintenance schedules, personnel.

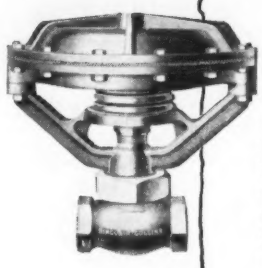
WASSELL ORGANIZATION, INC.
WESTPORT, CONNECTICUT

For more details circle NED-459 G1 on enclosed inquiry slip

control low and medium pressure raw water (hot or cold), steam, oil, air, gas or vacuum

SINCLAIR-COLLINS

DIAPHRAGM OPERATED VALVES



2-way direct and reverse acting, 3-way • air operated • automated or manual control • stainless steel trim • bronze or ductile iron bodies • pressures from near perfect vacuum to 350 psi • 1/16 to 3 in. NPT.

For more information, write for Bulletin SC-59. Address The Sinclair-Collins Valve Company, Akron 9, Ohio, Dept. NED-761.

8119-1

The SINCLAIR-COLLINS VALVE Co.
DIVISION OF INTERNATIONAL BASIC ECONOMY CORPORATION (IBEC)
AKRON 11, OHIO

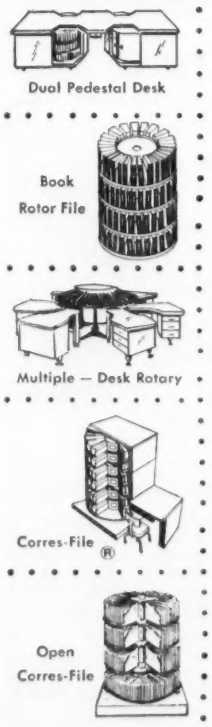
For more details circle NED-460 G1 on enclosed inquiry slip

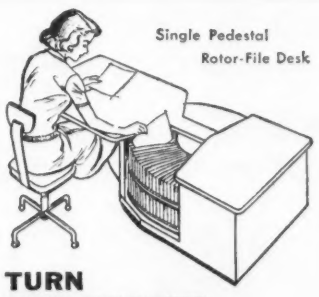
GET THIS VALUABLE NEW INSTRUMENT CATALOG

Here's what you should know about Barton differential pressure instruments. Which instruments to use, and where . . . Why a bellows-type meter is superior to a mercury type . . . Why certain meters can be over-ranged, why others can't . . . Descriptions of differential pressure controllers, integrating flow recorders, indicators, recorders, switches and transmitters. All this and more is included in this easy to read reference piece by Barton—and it's yours for the asking. **Write for it today.**

BARTON INSTRUMENT CORPORATION
580 MONTEREY PASS ROAD • MONTEREY PARK, CALIFORNIA

For more details circle NED-461 G1 on enclosed inquiry slip





TURN NEW PROFITS with WASSELL WORK ORGANIZERS

Wassell revolving files bring the work to the clerk:
• Turn walking hours into working hours
• Save up to 50% of filing time
• Increase accuracy, efficiency and clerk morale

And another big saving: Wassell Work Organizer revolving files *save up to 40% in floor space.* Send for your *free* literature on Work Organizers for the Sixties.

WASSELL ORGANIZATION INC.
WESTPORT, CONNECTICUT

For more details circle NED-462 G1 on enclosed inquiry slip

Machinery Production Inspection

All-Angle

MAGNETIC BASED INSPECTION MIRROR

Model M

Mounts and adjusts in seconds to bring hidden angles into FULL VIEW.

- SPEEDS WORK FLOW
- ALLOWS CONSTANT INSPECTION WHERE WORK IS PARTLY BLOCKED FROM VIEW

Powerful magnet base and all-angle ball joints hold 2⅛" x 3½" mirror at any needed angle.

NED 7-1

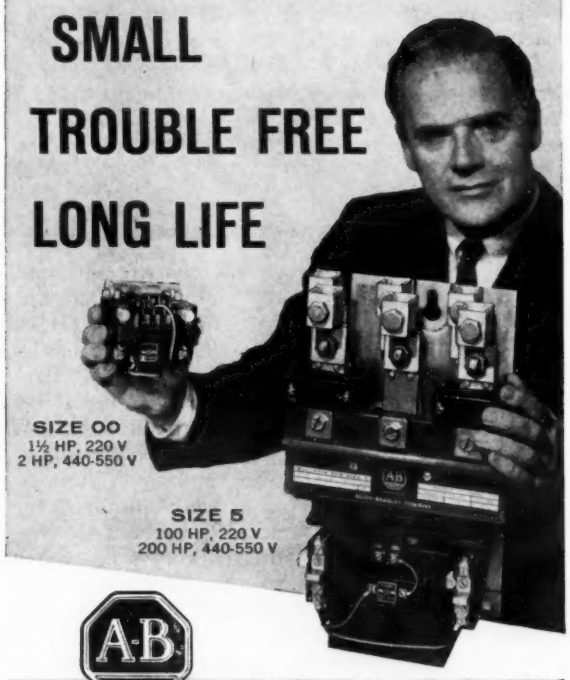
Price: $6.50 ea.

ULLMAN DEVICES CORPORATION Ridgefield, Connecticut

For more details circle NED-463 G1 on enclosed inquiry slip

NEW!
ALLEN-BRADLEY'S BULLETIN 709 STARTERS

SMALL
TROUBLE FREE
LONG LIFE



A-B QUALITY

Seven new Bulletin 709 solenoid starters give you a compactness that is almost unbelievable! Yet rating for rating, the switching capacity, life, and reliability have been increased tremendously. The new, patented, high-efficiency magnet has a short, cushioned stroke that reduces shock and wear. The new coil is molded for protection against mechanical damage and all corrosive atmospheres. The new weld-resistant cadmium oxide silver contacts seat firmly—without wear-causing sliding motion. The details are in Publication 6100.

BULLETIN 709—OPEN TYPE
New "Space-Saving" Dimensions

Starter Size	Height		Width		Depth	
	NEW	OLD	NEW	OLD	NEW	OLD
00	3⅝	—	3⅞	—	3⁹⁄₁₆	—
0	5⅞	5⅝	4¹⁄₁₆	4¾	3¹¹⁄₁₆	3¼
1	6⅝	5⅞	4½	5	3¹¹⁄₁₆	3¼
2	7⅝	10¹⁄₁₆	4⅝	5¾	3¹¹⁄₁₆	4⁷⁄₃₂
3	10¼	12⅝	6¼	7¼	5⁷⁄₁₆	5⁷⁄₁₆
4	11⁷⁄₁₆	16¼	7⁵⁄₁₆	12¾	6¼	6¹³⁄₁₆
5	14¹³⁄₁₆	20	9	16⅛	6½	8¾

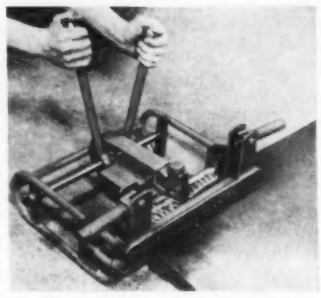
Similar "Spacesavings" are built into the Enclosed Starters

Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wis.

ALLEN-BRADLEY
Member of NEMA
QUALITY MOTOR CONTROL

For more details circle NED-464 G1 on enclosed inquiry slip

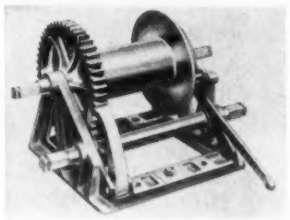
CONVEYOR BELT SPLICER
portable unit is one-man operated



Easily used in confined places, the Zipper portable splice maker for conveyor belts adjusts to all belt thicknesses, widths, and types. Unit has a vertical working height of only 16 in. and installs the new Hayden long-reach hook which grips belt carcass far back from the splice edge. Improved hook construction, combined with splicer's 7-mm hook spacing, assures sturdy, long-wearing splices. Machine accommodates four hook types without adjustment, and makes a splice in a single pass with minimum effort due to lever action clamps, automatic traverse, and three-stage hook compression. Two spring-loaded clamps, applied by cam action, hold the belt firmly for splicing. Each clamp provides 400-lb holding pressure. • **Scandura, Inc.**, N. Tryon Street at Keswick Avenue, Charlotte 1, N. C.

For more details circle NED-465 G1 on enclosed inquiry slip

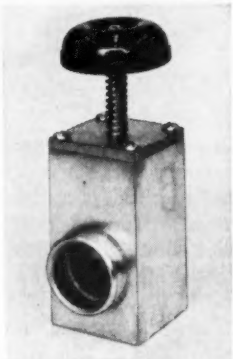
UTILITY WINCH
has up to 2000-lb capacity



This all steel derrick winch will handle up to 500 ft of ¼-in. cable. It operates in direct drive for high speed take-up, and at a 4:1 gear ratio for lifting or pulling. It has a spring-loaded dog which can be released for free spooling, and a lever operated hand brake. One man can easily lift 1000-lb with a single line, and two men using two cranks can lift 2000-lb loads. • **Beebe Bros. Mfg. Co.**, 2724 Sixth Ave. S., Seattle 4, Wash.

For more details circle NED-466 G1 on enclosed inquiry slip

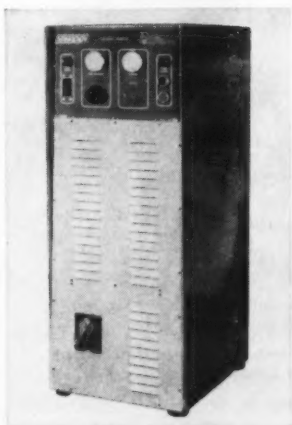
BLOCK VALVES
mount in high vacuum systems



Machined from solid brass square stock, series of block valves for industrial high vacuum systems provides in-line or angle configurations for soldered or screwed connections in sizes from ¼ to 1½ in. In many models, a special long-stroke brass bellows allows disc to lift completely clear of inlet opening. Valves average over 10,000 openings and closings before bellows failure. All valves under 1 in. use the same bellows assembly, minimizing the spares needed for maintenance. Standard O-rings and disc gaskets are neoprene, although other materials are available. • **NRC Equipment Corp.**, 160 Charlemont St., Newton 61, Mass.

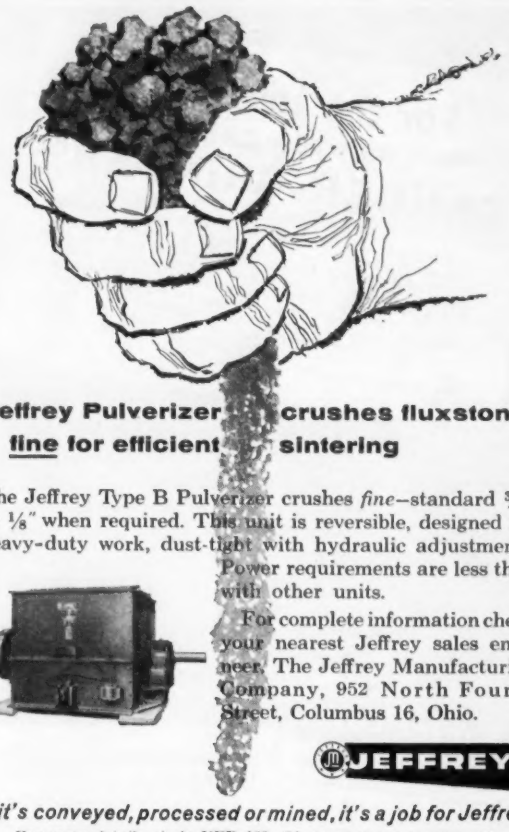
For more details circle NED-467 G1 on enclosed inquiry slip

ULTRASONIC GENERATOR
has automatic load compensation



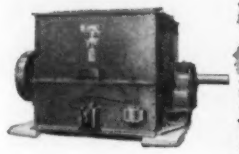
An average power output of 3500 w, with a peak on pulses of 7000 w, is offorded by the Model LG-3500A Sonogen single unit ultrasonic generator. It automatically adjusts itself to variations in cleaning load, temperature of solution, and tank volume. The automatic load feature compensates for both frequency and impedance simulaneously to keep the acoustic energy at a peak performance level. Unit is suited for high speed steel strip cleaners, multiple strand wire cleaning machines, long conveyorized systems, and large volume or heavy duty batch operations. Generator drives Sonogen-Z transducers, available in various types. • **Branson Instruments, Inc.**, 40 Brown House Rd., Stamford, Conn.

For more details circle NED-468 G1 on enclosed inquiry slip



Jeffrey Pulverizer crushes fluxstone fine for efficient sintering

The Jeffrey Type B Pulverizer crushes *fine*—standard ⅜", or ⅛" when required. This unit is reversible, designed for heavy-duty work, dust-tight with hydraulic adjustments. Power requirements are less than with other units.



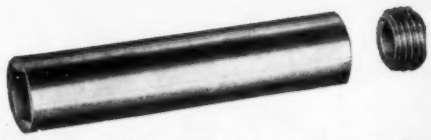
For complete information check your nearest Jeffrey sales engineer, The Jeffrey Manufacturing Company, 952 North Fourth Street, Columbus 16, Ohio.

JEFFREY

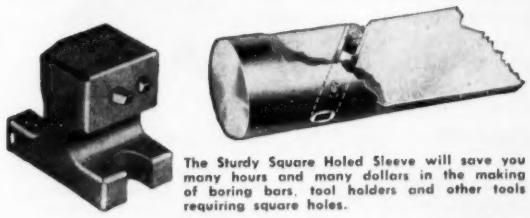
If it's conveyed, processed or mined, it's a job for Jeffrey.

For more details circle NED-469 G1 on enclosed inquiry slip

How SQUARE HOLED SLEEVES SPEED UP TOOL-MAKING!



One of the most difficult problems in toolmaking can be solved easily and quickly with Sturdy Square Holed Sleeves. The perfection of broached square holes can be had in boring bars, milling cutters and many other applications at a small fraction of the cost of imperfect hand-made square holes. The Sturdy Square Holed Sleeve consists of a round sleeve with a perfectly square hole broached through the center. This hole is tapped at one end to receive a back-up screw which is furnished with the Sleeve. The Sleeve can be sweated or pressed into a drilled and reamed hole to make a perfectly square accurate hole in a very few minutes.



The Sturdy Square Holed Sleeve will save you many hours and many dollars in the making of boring bars, tool holders and other tools requiring square holes.

SLEEVES MADE IN FOLLOWING SIZES: 3/16, ¼, 5/16, ⅜, 7/16, ½, ⅝, ¾, 1"

Write for Literature

STURDY BROACHING SERVICE, INC.
23514 TELEGRAPH RD., SOUTHFIELD, MICH.

For more details circle NED-470 G1 on enclosed inquiry slip

STOP

PORTABLE! MIDWEIGHT! QUALITY ENGINEERED!
Exclusive 3-way, pivotal-rigid combination handle. Either-hand, momentary safety switch.
13" KL-13
$169.50
for areas up to 5,000 sq. ft.

Generals ARE FEATURE-FILLED

GO

MAIL COUPON FOR COMPLETE DETAILS

PUT $100 BACK IN YOUR POCKET!
WHY SPEND $300 FOR A LARGE FLOOR MACHINE? THE NEW

General

15" KL-15
at
$199.50
DOES THE WORK PERFECTLY
for areas up to 7,500 sq. ft.

General FLOORCRAFT, INC.
3630 Rombouts Ave., Bronx 66, N. Y. Est. 1930
• All Sizes For All Types of Floors—Made By Floor Specialists
• World's Most Complete Line of Floor Maintenance Machines & Vacuums

NE-7
☐ Have Distributor call on us.
☐ Send complete information, literature and prices.
☐ Floor Machine ☐ Vacuum
Company
Street
City State
My Name Title

For more details circle NED-471 G1 on enclosed inquiry slip

For the tough jobs
PORTER-CABLE
SANDER-GRINDERS

Engineered and powered to meet the demands of industrial operations . . . for blending and finishing all kinds of steel and alloys, cleaning weld spatters and castings, removing rust and scale, cutting metal. Extra heavy duty motors for greater efficiency, longer life . . . magnesium alloy housings for extra toughness and lightweight . . . extra large ball bearings . . . hardened spiral bevel gears. Available in 3 models: 5300 rpm, 6000 rpm and 5000 rpm with 15° tilt head. Write for descriptive folder.

Porter-Cable Quality Power Products
PORTER-CABLE MACHINE CO.
1127 Marcellus St., Syracuse 4, N.Y.

For more details circle NED-472 G1 on enclosed inquiry slip

R/M CAPABILITY DOES IT AGAIN!
Develops FLUOROBESTOS --an outstanding gasket material for LOX and cryogenic service

R/M Fluorobestos® is a high-grade, long-fiber asbestos unwoven sheet thoroughly impregnated with Teflon.* It has the same sealing and physical characteristics as compressed asbestos sheet, with the added benefits of Teflon. Deformation under load at 500°F (2000 psi) is only 0.1%.

*Registered trademark for Du Pont fluorocarbon resins

Write for our Mechanical Packings and Gasket Materials Catalog — it contains complete information about R/M Fluorobestos and other R/M packing materials

RAYBESTOS-MANHATTAN, INC.
R/M PACKINGS
PACKING DIVISION, PASSAIC, N.J.
MECHANICAL PACKINGS AND GASKET MATERIALS

For more details circle NED-473 G1 on enclosed inquiry slip

Your SOABAR MAN* recommends...

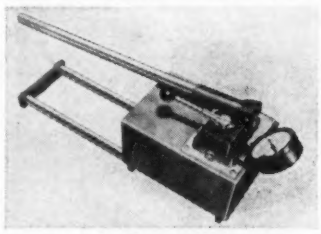
"Here's a real time-and-money saving production tip: Mark tickets and labels in your own plant . . . when you want them . . . without costly inventories of pre-printed items. It's easy the SOABAR way! You see, SOABAR roll tickets and labels are designed to your exact marking specifications . . . tailored to your requirements for neat and accurate product identification, pricing, content disclosure, shipping or internal control. And versatile SOABAR marking equipment keeps pace with your production line . . . rapidly, efficiently, automatically. Ask your SOABAR MAN next time he calls how SOABAR marks everything but time."

*Robert Tragus, District Manager, Cleveland, Ohio . . . one of 36 SOABAR marking specialists conveniently located throughout the U. S.

Soabar COMPANY
Specialists in Marking Equipment and Roll Tickets and Labels Since 1912
7722 Dungan Road • Philadelphia 11, Pa.

For more details circle NED-474 G1 on enclosed inquiry slip

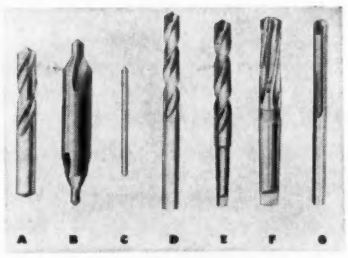
HYDRAULIC HAND PUMP
two speed, high pressure model



Series Y-29 Dualmaster two-speed hydraulic hand pump automatically changes from the low pressure stage of 7.35 cu in. per stroke from 0 to 200 psi to the high pressure stage of 0.294 cu in. per stroke from 200 to 10,000 psi. Pump and valving are compactly mounted on a common cover plate, permitting use with other than the standard 2-gal capacity reservoir. Either a two-way valve for controlling single-acting cylinders or a four-way valve for double-acting cylinders may be used. • **Owatonna Tool Co.**, 436 Cedar St., Owatonna, Minn.

For more details circle NED-475 G1 on enclosed inquiry slip

TWIST DRILLS
550 sizes and styles added to line



Thirteen high speed steel, solid carbide, and carbide tipped drills in various sizes total over 550 different tools which have been added to the American line of twist drills. Among them are fractional wire and letter sizes of solid carbide drills, combined drills and countersinks, drill blanks, carbide tipped drills in straight and taper shank styles, carbide tipped core drills, and hardened steel drills, shown left to right. • **American Twist Drill Co.**, 14301 W. Chicago Blvd., Detroit 28, Mich.

For more details circle NED-476 G1 on enclosed inquiry slip

OVERHEAD GAS HEATER
in 115,000 and 85,000-Btu sizes

Open flame is not exposed to the room in this Sealed/Flame overhead gas unit heater, especially suitable for small buildings, relay stations, and other areas where exhaust fans create negative pressure. Sealed combustion system prevents spilling of combustion products into heated space. Combustion air is drawn from outside and exhaust gases are pressure vented to outside through separate pipes. If pilot goes out, a purge period occurs before pilot is lighted again, electrically. Units are offered in 115,000 and 85,000-Btu/hr sizes and distribute a circle of warm air downward and outward. • **John J. Nesbitt, Inc.**, State Road & Rhawn Streets, Philadelphia 36, Pa.

For more details circle NED-477 G1 on enclosed inquiry slip

New from WESTERN
WORM GEAR JACKS

6 Models—2 to 50 Tons Capacity

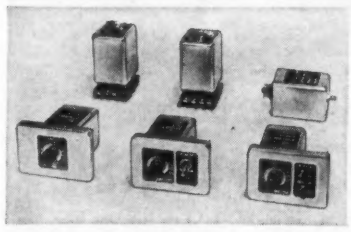
For Accurate Positioning of Loads Weighing Several Hundred Tons

- Can be used singly, in tandem or in multiple jacking arrangements.
- Functioning as components of machinery or equipment—raises or lowers loads—horizontally to push—to apply pressure—as linear actuators. SELF-LOCKING . . . NO CREEP!
- Holds heavy loads in position indefinitely when two or more jacks are tied together mechanically.
- Raise and Lower in *Exact Unison* when two or more jacks are coupled with Western Mitre Gear Boxes.
- Lifting screws made of alloy steel.
- All bearings are Timken tapered roller bearings.
- Alemite grease fittings.

Standard raise is six inches. Raises up to 24 inches available on request.
Write for further Information
9865
WESTERN INDUSTRIES INC.
Industrial Products Division
2702 West 36th Place • Chicago 32, Illinois

For more details circle NED-478 G1 on enclosed inquiry slip

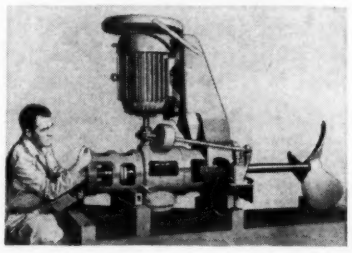
LONG-DELAY RELAYS
several styles are transistorized



Operating on alternating or direct current, these voltage and pulse stabilized long-delay relays function as an on-time relay, off-time relay, or interval timer with instantaneous reset action. Operating temperature range is up to 65° C and timing accuracy is ±5 per cent. Timing periods are available from a few seconds to over 1½ hr, with adjustable units having a calibrated dial. Units may be surface or flush panel mounted, with either solid state or relay output. Use of 5-amp, three-pole double-throw contacts eliminates need for auxiliary relays. • **Clearview Electronics Corp.**, 140 E. Main St., Elkton, Md.

For more details circle NED-479 G1 on enclosed inquiry slip

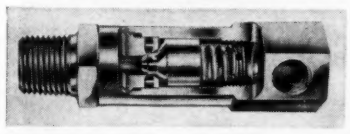
SIDE-ENTERING MIXERS
three basic sizes rated 1 to 50 hp



Lightnin NSE mixers for process industry fluid agitation are right-angle, spiral bevel gear units with hollow quill speed reducers designed for side-entering applications. Three basic sizes for applications ranging from 1 to 50 hp replace the line with a previous limit of 25 hp. New models have a 50 per cent greater flow of blending capacity and lower installation and operating costs. One of these units often eliminates the need for multiple unit installations. • **Mixing Equipment Co.**, 170 Mt. Read Blvd., Rochester 3, N. Y.

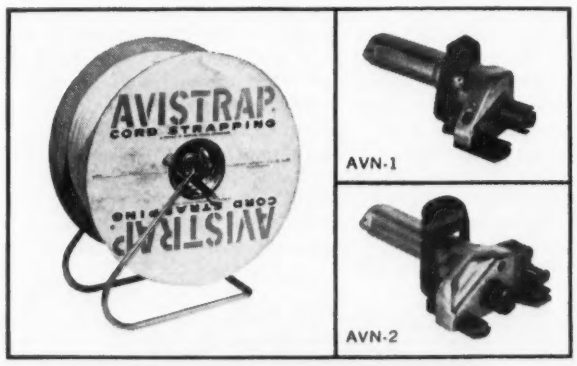
For more details circle NED-480 G1 on enclosed inquiry slip

RELIEF VALVES
made in 10 connection combinations



Internally adjustable through a wide range, Kep-O-Seal relief valves have a flexible, leak-tight, blow out-proof Teflon seal that resists damage by contamination and wire drawing. A vibration resistant Nylok adjustment assures constant pressure setting. Valves are made of steel and are stocked in ten connection combinations of ¼, ⅜, and ½-in. dryseal pipe. All models are rated at 10 gpm with relieving pressure settings up to 2000 psi, and have a standard temperature range of −40 to 300° F. • **Kepner Products Co.**, 7327 W. 59th St., Summit, Ill.

For more details circle NED-481 G1 on enclosed inquiry slip



NEW—PNEUMATIC TENSIONERS FOR AVISTRAP® CORD STRAPPING

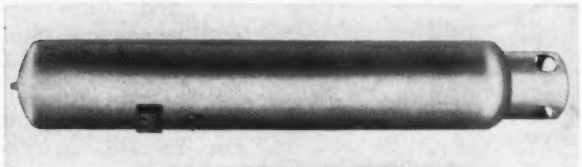
Pneumatic tools bring new speed and convenience to palletizing, reinforcing, banding, unitizing and baling with AVISTRAP cord strapping. Other AVISTRAP advantages: safety, light weight, ability to absorb shocks that snap comparable-width metal strapping. Write for data on new pneumatic tools, AVISTRAP literature, or to arrange in-plant demonstration.

AVISTRAP CORD STRAPPING*
*PATENTS PENDING
INDUSTRIAL PACKAGING DEPARTMENT
American Viscose Corporation, 1617 Pennsylvania Boulevard, Philadelphia 3, Pa.

For more details circle NED-482 G1 on enclosed inquiry slip

AIR RECEIVERS
in stock or custom constructions

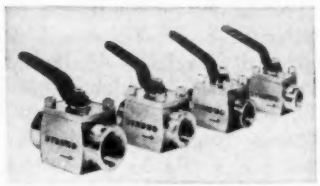
Made by automated production processes, line of air receivers meet the requirements of ASME, ABS, U. S. Coast Guard, and the National Board. Tanks are



available in stock sizes, or custom-constructed to special pressure, base, mounting, and opening requirements. • **Engineering Controls, Inc.**, 611 E. Marceau, St. Louis 11, Mo.

▲ For more details circle **NED-483 G1** on enclosed inquiry slip ▲

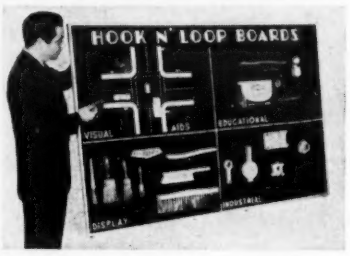
TOP ENTRY BALL VALVES
for up to 1000-psi WOG service



One-piece body of cadmium-plated steel or stainless steel bar stock, hard chrome-plated bronze or stainless steel ball, and seals of Buna-N or Teflon are features of the Evrtyte line of top entry ball valves. They are suited for water, oil, liquid chemical, and gas service at temperatures to 365° F and pressures to 1000 psi. Top entry facilitates servicing of these valves which are made with threaded connections in 3/8, 1/2, 3/4, and 1-in. sizes. • **White Sewing Machine Co.**, Strong Div., 508 Sandusky St., Conneaut, Ohio.

▲ For more details circle **NED-484 G1** on enclosed inquiry slip ▲

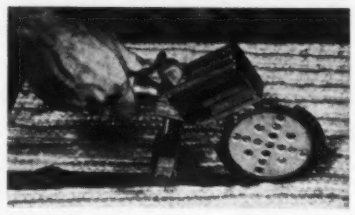
BULLETIN & DISPLAY BOARDS
hold heavy objects without slipping



Three steps required to use Hook N'Look visual bulletin, display, and presentation boards are peeling paper back from pressure-sensitive nylon Hook N'Loop tape, pressing the adhesive back onto the card or product to be displayed, and placing the card or product on the board. Tiny nylon hooks on the tape grip the nylon loops of the board, interlocking to form a bond that will not come loose, slip, or jam. A 1-in. square of tape will hold up to 10 lb. Only slight pressure is required for removal. The lightweight, compact boards have a built-in easel; they can also be wall mounted or built into panels. Various standard sizes and colors are offered, as are special models. • **Charles Mayer Studios, Inc.**, 130 W. Bowery St., Akron 8, Ohio.

▲ For more details circle **NED-485 G1** on enclosed inquiry slip ▲

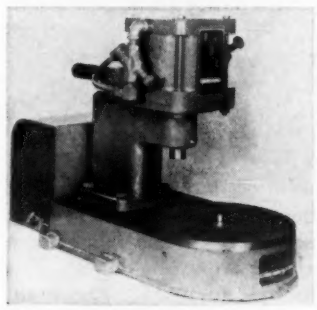
CUTTER-EDGE SEALER
for synthetic fiber materials



As the Seal-Cutter is pushed across acetate, rayon, nylon, acetate-cotton mixtures, and other synthetic fiber material, it cuts and seals or fuses the material edges to prevent raveling or fraying. A sharp Carboloy-iridium alloy edge is electrically heated to fuse the threads after cutting. Operator can follow the thread of a material, or the cutter can be pushed along a slot in a table to make a square cut. Cutting speed is equal to that of scissors. Seal-Cutter weighs 2 1/4 lb, takes 482 w at 115 v ac, and has an asbestos covered cord. Price is $195. • **Sjostrom Machine Co.**, 134 N. W. 16th St., Boca Raton, Fla.

▲ For more details circle **NED-487 G1** on enclosed inquiry slip ▲

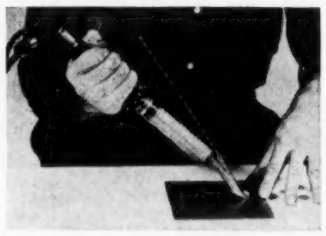
DIAL ASSEMBLY PRESS
has 2-in. stroke, 1-ton capacity



Geneva index motion provides accurate positioning of work under this PDC Automatic dial assembly press. It has an 11-in. diameter plate with eight work stations and a 1-ton press head with a 2-in. stroke and 3-in. throat. Mounted on bench, machine has a variable speed drive in the range of 18 to 38 indexes per minute. It is optionally available with a combination press-stake, spinning, or welding head. • **Precision Detroit Co.**, 20100 Sherwood Ave., Detroit 34, Mich.

▲ For more details circle **NED-488 G1** on enclosed inquiry slip ▲

ELECTRIC PLASTIC WELDER
joins most thermoplastics



Butt, lap, curved, and other types of welds are produced by this electric welder in plastic fabrication, installation, or maintenance operations. It welds most thermoplastics, including plasticized tank linings, unplasticized rigid polyvinyl chloride, polyethylene, and polypropylene. Weld speed is about 48 ipm on simple flat or curved surfaces. Hot nitrogen or compressed air heats both the area being welded and the automatically fed welding rod. The 14-in. long welder weighs 14 oz and operates on 110 v ac. Temperature is adjustable. • **Seelye Plastic-Fab, Inc.**, 984 Central Ave., Minneapolis 13, Minn.

▲ For more details circle **NED-489 G1** on enclosed inquiry slip ▲

Every shop needs a Shoplifter

Here is the economical way to transfer molds and dies, unload trucks, stack in narrow aisles, or raise parts and machinery to working level.

The Shoplifter is a compact, portable, easy to operate, lifter that will make the job easier for every man in your shop. And . . . it is quality built for years of dependable service with minimum maintenance.

New MARK II Shoplifter has a capacity of 750 lbs., 54" platform lift, full control hoist unit, and complete safety features. Priced at only $195.00 fob Chicago. Order your MARK II now for immediate delivery.

ECONOMY ENGINEERING
4519 W. Lake St.
Chicago 24, Ill.

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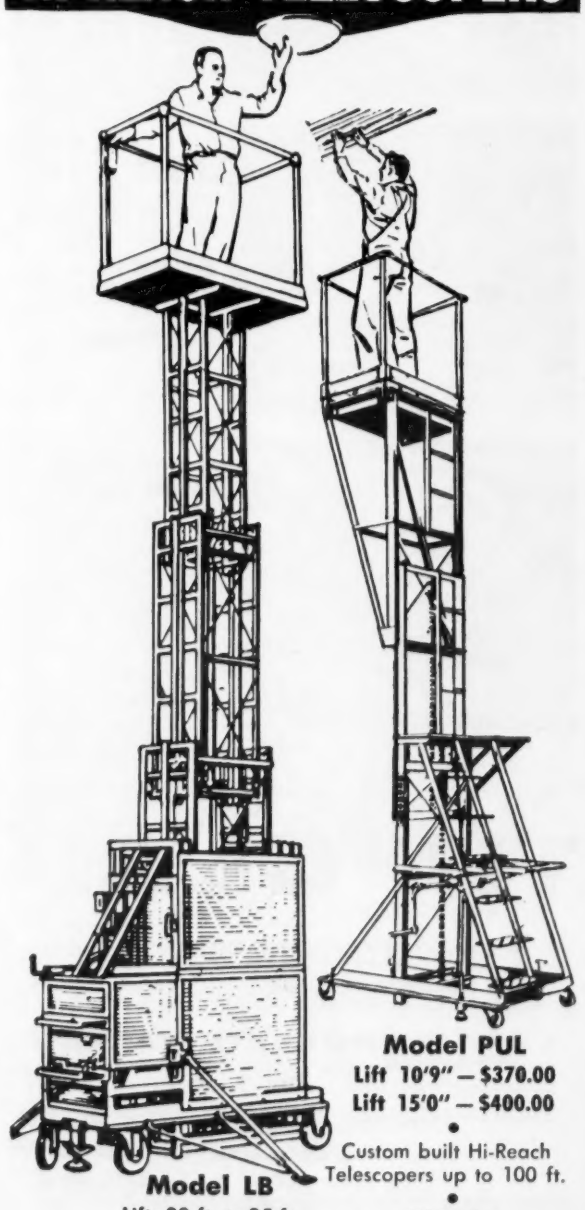
OVERHEAD SERVICING is Faster and Safer with HI-REACH TELESCOPERS



Model PUL
Lift 10'9" — $370.00
Lift 15'0" — $400.00
•
Custom built Hi-Reach Telescopers up to 100 ft.
•
Write for complete catalog

Model LB
Lifts 20 ft. to 35 ft.
$1510.00 up

Headquarters for standard and special built overhead servicing lifters and material handling equipment since 1901.

ECONOMY ENGINEERING
4519 W. Lake St., Chicago 24, Illinois

▲ For more details circle **NED-491 G1** on enclosed inquiry slip ▲

NEW
16 oz. CAN
33% MORE INK
no increase in price

Proven Best for Stenciling Corrugated Cartons, Boxes, and All Other Shipping Containers.

Fast, Easy Stenciling on Steel, Wood, Paper, Fiber, Plastic, Stone, Glass and other Surfaces.

FAST • EASY • CLEAN
STENCILING
with REYNOLDS
Instant Dry STENCIL INKS

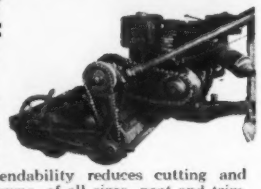
• Unsurpassed for stenciling corrugated cartons, metal, paper, concrete, or other surfaces. Easy to hold aerosol container sprays a dense, compact cone of specially formulated waterproof ink. Very opaque. Dries instantly. 9 colors.

Get full details about Reynolds Stencil Inks; Stencil-Kover and other Specialty Products.

WRITE FOR BULLETIN NO. 601 TODAY.
REYNOLDS INK, Inc.
2077 East 65th Street • Cleveland 3, Ohio

▲ For more details circle **NED-486 G1** on enclosed inquiry slip ▲

ONLY LOCKE TRIPLEX MOWERS HAVE FULL CHAIN DRIVE



Your best power lawn mower value is the versatile LOCKE TRIPLEX!

It's the *only* power mower with three perfectly synchronized chain driven, counterbalanced cutting units, revolving at the same rate of speed . . . on wet or dry grass.

Locke exclusive features and dependability reduces cutting and trimming time by ½. Keeps lawns, of all sizes, neat and trim.

DRIVES: Guarded, heat treated and hardened steel sprocket roller chain.

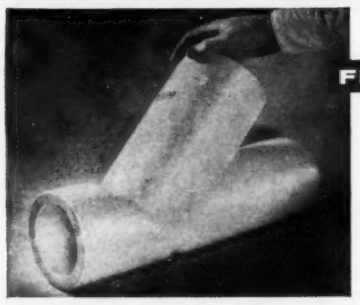
BLADES: Heat treated and hardened alloy steel motor driven spiral type reels, mounted on ball bearings.

SINGLES . . . 25" & 30" TRIPLEXS . . . 70" & 75"
Plain or Reverse.

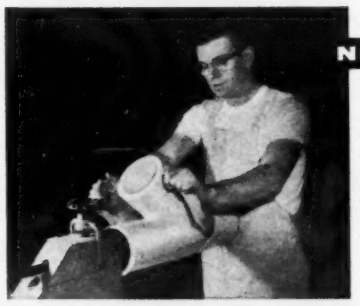
Send for literature. Ask your Locke Service Dealer for a full Demonstration, now.

Locke POWER LAWN MOWERS
1087 CONNECTICUT AVE., BRIDGEPORT 1, CONN.
A product of the Locke Steel Chain Co.

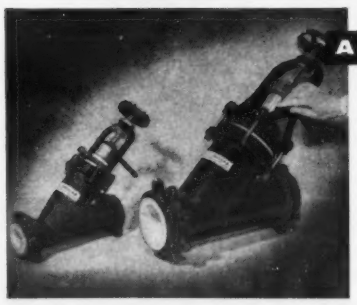
▲ For more details circle **NED-492 G1** on enclosed inquiry slip ▲



FIRST the valve itself—Lapp porcelain, chemically inert, to resist corrosion from any acid (except Hydrofluoric) in a process.



NEXT layers of strong Fiberglass cloth to cushion the porcelain against impact and insulate it against thermal shock.



AND THEN, high-strength, chemical-resistant Epoxy resin, impregnating the Fiberglass, bonding it to the porcelain—adding the protection of armor to the corrosion resistance of Lapp chemical porcelain.

TUFCLAD®

...THE EXTRA PROTECTION YOU GET IN LOW-COST

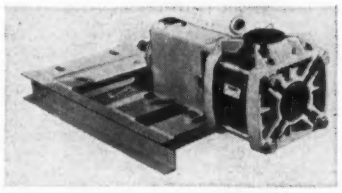
LAPP PORCELAIN VALVES

WRITE *for Catalog 567—description and specifications of Lapp Y-Valves and Angle Valves, in ½" to 6" sizes. Lapp Insulator Co., Inc., Process Equipment Division, 2519 Chestnut St., LeRoy, N. Y.*

Lapp
CHEMICAL PORCELAIN

▲ For more details circle **NED-493 G1** on enclosed inquiry slip ▲

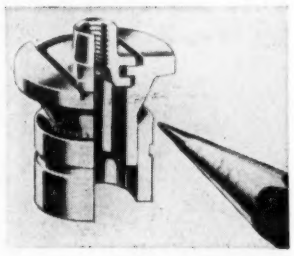
IMPERVIOUS GRAPHITE PUMPS
in 1, 1½, and 2-in. discharge sizes



Added to line of Karbate impervious graphite pumps is a frame-mounted series with 1, 1½, and 2-in. discharge openings. This supplements frame-mounted Type C pumps available in 2, 3, and 4-in. discharge sizes. The new pumps use the same wet end parts as the Type F pump, previously available only in motor-mounted units. Frame-mounted C pumps have an external seal; Type F, an internal seal on both motor and frame mounted series. • **National Carbon Co.**, 270 Park Ave., New York 17, N. Y.

▲ For more details circle **NED-494 G1** on enclosed inquiry slip ▲

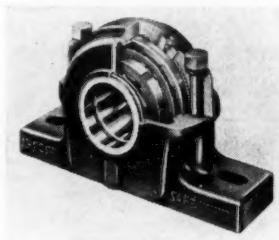
FLOATING LOCKNUTS
for honeycomb or sandwich panels



A floating nut element is combined with a structural type panel fastener in the Delron 700 series of floating locknuts for honeycomb or sandwich type panels. Floating action allows for misalignment up to 1/16 in. Fastener is installed in one straight-through drilled hole, with hand arbor press or any ram type equipment used to expand the fastener within the core area. Locknuts are available for ¼-in. panels and up in sizes from 8-32 to ¼-28. Aluminum and carbon or stainless steel body sections are available. • **Delron Co.**, 5224 Southern Ave., South Gate, Calif.

▲ For more details circle **NED-495 G1** on enclosed inquiry slip ▲

PILLOW BLOCKS
roller bearing units for heavy loads



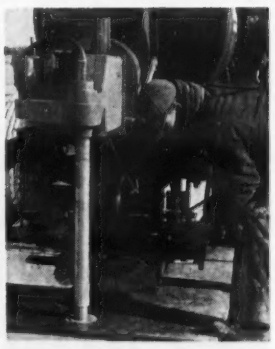
Shaft sizes from 1 7/16 to 9 9/16 in., triple rotating labyrinth seals which seal foreign matter out and retain lubricant, and elongated bolt holes for easy horizontal alignment are features of SKF - SAFS heavy duty steel pillow blocks. Equipped with SKF spherical roller bearings, they absorb heavy loads and severe impacts. Oil or grease is applied directly to rotating elements through a groove in the outer ring or to the bearing from a point near the bearing face. Circulating oil systems can be installed, or cooling coils can be adapted. A large oil reservoir holds the desired oil level for long periods. • **SKF Industries, Inc.**, Front Street & Erie Avenue, Philadelphia 32, Pa.

▲ For more details circle **NED-496 G1** on enclosed inquiry slip ▲

TRUCO® DOES IT AGAIN!

80% cost reduction in airport runway lighting by installation of pancake lights

Cutting slot raceways for wiring.



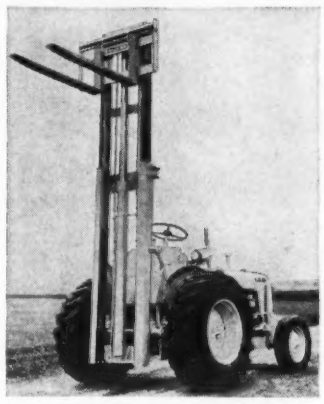
Drilling holes for light units.

Truco "pancake" diamond drill on Truco Model G, gasoline powered, truck-mounted drill rig cut holes for light units 6" dia. x 1" deep. Truco Concrete Saw with 14" Truco diamond blades sawed miles of slots for wiring raceways in both bituminous and portland cement concrete runways. Even greater savings now possible using new Tru-Vac® Vacuum Pad to anchor drill rig in seconds. Write for our new Catalog.

TRUCO® MASONRY DRILLING DIVISION
WHEEL TRUEING TOOL COMPANY
178-3200 W. Davison, Detroit 38, Mich. • 575 Langlois, Windsor, Ont.

▲ For more details circle **NED-497 G1** on enclosed inquiry slip ▲

FORK LIFT
has 5000-lb maximum capacity and 8, 10, 12, 14, and 21-ft lifts



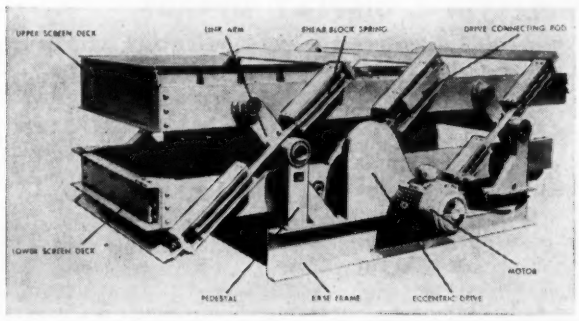
Six-inch side movement of mast, power steering, and direct forward-reverse gear shifting are features of the Model 551 fork lift. The heavy duty unit can be used indoors and outdoors, and is stable and maneuverable on uneven, muddy, and slippery surfaces. The Du-Al shuttle transmission has six forward and two reverse speeds. Working speeds are 1.5 to 7.21 mph, and transport speed is 15 mph.

At maximum lift height of 21 ft, a 2000-lb load is handled. It is also available in 8, 10, 12, and 14-ft lift heights with 4000-lb capacity at 12 to 16 ft and 5000 lb at 12 ft and below. The 4-in. thick, 1½-in. wide forks are made in 30, 36, 42, and 48-in. lengths. Operator's canopy is optional. Engine is gasoline or diesel. Various accessories are available. • **Oliver Corp.**, 400 W. Madison St., Chicago 6, Ill.

▲ For more details circle **NED-498 G1** on enclosed inquiry slip ▲

HORIZONTAL VIBRATORY SCREEN
features suspension at point of no oscillation, balanced-mass design

True balanced-mass design, where screening (or conveying) decks are balanced against one another, is feature of the Comco horizontal vibratory screen. The



screen decks are supported on the base exactly in their center of oscillation—a point of no oscillation—and thus transmit no vibration to the base frame. Special supporting structures are not needed.

Other features include an eccentric drive which provides linear oscillation that conveys materials uniformly across screen without sliding. The self-adjusting drive continues its full-stroke action regardless of load. Large erratic start-stop vibrations are completely eliminated. • **Comco Corp.**, 5421 Lancaster Ave., Philadelphia 31, Pa.

▲ For more details circle **NED-499 G1** on enclosed inquiry slip ▲

TURNS *Every* SHAPE!

REED

Reed comes in 10", 14", 18", 24", 36", 48" and 60" lengths.

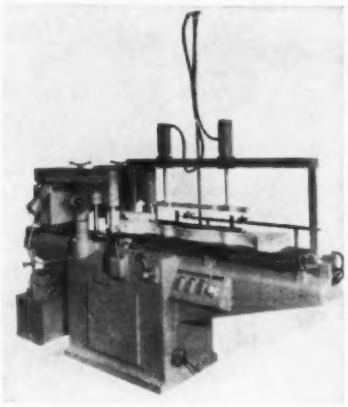
This newer Reed-line Chain Wrench is a Plus-tool: It does every job you can do with a conventional pipe wrench—plus—the jobs a conventional pipe wrench can't do! Reed Chain Wrench has faster, ratchet-like action which permits screwing up or unscrewing from either side . . . without removing the wrench from the pipe. Reed Chain Wrench turns every shape as it works easily where an ordinary wrench won't work at all—close to baseboards, in tight corners and between parallel pipe lines. Reed Chain Wrench holds firmly and securely without "play" or crushing.

ASK YOUR SUPPLIER OR WRITE FOR FREE LITERATURE.

REED MANUFACTURING COMPANY
ERIE • PENNSYLVANIA, U. S. A.

▲ For more details circle **NED-500 G1** on enclosed inquiry slip ▲

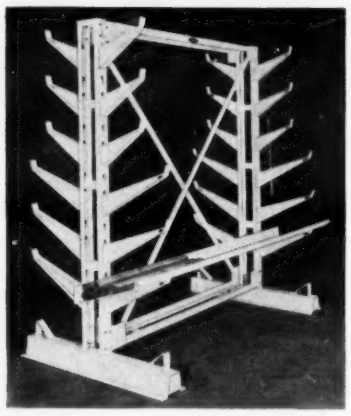
SHAPING & PROFILING MACHINE
shapes one or both sides of wood



Both the PS-44 and PS-72 profiling and shaping machines are two-side, two-spindle types which shape straight or irregular edges on one or opposite sides of wood parts. Pieces can be equally or unequally formed as they pass through the cutting cycle. Each head moves independently of the other. Parts to be shaped on one side only can be laid back-to-back, or stacked in multiples. Model PS-44 has 48-in. table travel and work capacity of 44 in., whereas Model PS-72 has 76-in. table travel and 72-in. work length capacity. Both accommodate widths to 8 in. Feed speed is infinitely variable from 0 to 80 fpm. • **Ekstrom, Carlson & Co.,** 1400 Railroad Ave., Rockford, Ill.

▲ For more details circle **NED-501 G1** on enclosed inquiry slip ▲

STORAGE RACK
is adjustable-arm cantilever unit



Single or double arm construction is offered in the self-standing adjustable-arm cantilever storage rack for long tubular or rod stock. Standard seven-tier (six arms high plus base) double-arm unit has load capacity of 28,000 lb or 1000 lb per arm. Columns are of heavy structural steel welded to formed bases joined by X-bracing. Keyway slots on column faces allow 4-in. spacing of arms without bolts or nuts. Twelve or 16-in. arms can be chosen. To accommodate short length pipe, rod, and small parts, 12-gage pans designed to span two arms are available. Price is $155.30. • **Jarke Mfg. Co.,** 6333 Howard St., Chicago 48, Ill.

▲ For more details circle **NED-502 G1** on enclosed inquiry slip ▲

Guide to Fluorescent Lamp Ballasts

FREE Universal Mfg. Corp.—16-page "Manual of Fluorescent Lamp Ballasts" is title of handbook on the selection, operation, and care of lamp ballasts to obtain top results. Described in this Bulletin M-1160 are various types of ballasts and suggested applications.

▲ For more details circle **NED-503 G1** on enclosed inquiry slip ▲

PULLEY LAGGING
cured sheet is fire resistant

Stocked kits facilitate the lagging of any sizes of pulleys without removing them from the conveyor. Durable, fire resistant, cured sheet is cold bonded. A simple instruction sheet is included. Lagging may be easily installed in hard-to-get-at places without machinery or special skill. • **General Splice Corp.,** 32 Woodworth Ave., Yonkers, N. Y.

▲ For more details circle **NED-505 G1** on enclosed inquiry slip ▲

CONTAINER FILLER
for 4-oz to 5-gal containers

All types of containers with 4-oz to 5-gal capacities are filled with hair-line accuracy by the Monoscale filler. Fill control is by weight. From 120 to 1200 containers can be filled per hour, depending upon size and neck opening. As fill nears completion, flow rate is automatically reduced to minimize surging or splashing. Spout changes can be made in 30 sec; container size changes in 2 min. Filler is also available on a low stand for bench mounting, or to handle large containers. • **Karl Kiefer Machine Co.,** 919 Martin St., Cincinnati 2, Ohio.

▲ For more details circle **NED-506 G1** on enclosed inquiry slip ▲

AIR LINE LUBRICATOR
delivers suspended fog-like mist

Pressure differential created by the air velocity through the venturi feed of the PSC air line lubricator controls the amount of oil that is automatically injected into the air stream. A suspended fog-like mist is delivered for distribution to working parts of pneumatic tools and equipment. Oil is metered by setting an external valve and fed in direct proportion to the volume of air consumed. It can be refilled while operating. It has a transparent oil reservoir and is made for 1/4, 3/8, 1/2, and 3/4-in. NPT pipe sizes. • **Perfecting Service Co.,** 332 Atando Ave., Charlotte 6, N. C.

▲ For more details circle **NED-507 G1** on enclosed inquiry slip ▲

JUST OFF THE PRESS

New Complete CATALOG with Prices.

FREE

A complete line of small bore "Throw-away" type Cylinders used in all industry for clamping, positioning, etc.,

Write for CATALOG TODAY

Write for latest catalog and name of nearest distributor. BIMBA MANUFACTURING CO. 110 Main St., MONEE, ILL.

▲ For more details circle **NED-508 G1** on enclosed inquiry slip ▲

NEW SAW CUTS 1" STEEL BAR IN 23 SECONDS!

NEW SKIL MODEL 701 . . . World's only portable electric metal-cutting hacksaw!

Two speeds—1000 and 1400 strokes per minute for fast cutting of different gauges and densities of metals, from hardest alloys to mild steels and non-ferrous metals.

Example: Cuts 1/4" x 1 1/2" stainless steel angle in only 65 seconds; cuts 2" cast iron pipe in less than 2 minutes.

Call your Skil distributor for a demonstration. Look under "Tools-Electric" in the "Yellow Pages." Or Write: Skil Corporation, Dept. 119G, 5033 Elston Ave., Chicago 30, Illinois.

SKIL ... and SKILSAW POWER TOOLS

▲ For more details circle **NED-509 G1** on enclosed inquiry slip ▲

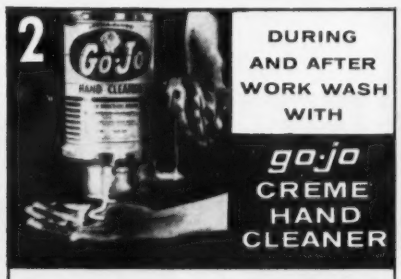
INTRODUCING THE go·jo

3-STEP PROGRAM FOR HAND CARE

Maximum Cleansing Effectiveness Plus Positive Precaution Against Skin Irritation

1 BEFORE WORK APPLY go·jo LIQUID PROTECTIVE SKIN COAT

Helping squelch trouble before it begins, new Go-Jo Liquid Protective Skin Coat creates an invisible, greaseless barrier that prevents dirt and irritants from entering the pores. Liquid Protective Skin Coat does not impair sensitivity as do gloves and will not affect materials handled.



2 DURING AND AFTER WORK WASH WITH go·jo CREME HAND CLEANER

It's best to wash as often as grease and grime accumulate. (Prior application of Skin Coat facilitates clean-up.) Go-Jo Creme Hand Cleaner contains antiseptic GT-7 to help prevent irritation, and may be used without water for the frequent on-the-spot clean-ups.

3 AFTER WORK APPLY go·jo LIQUID PROTECTIVE SKIN COAT

Because its emollient ingredients replace natural skin oils and soothe tiny nicks and scrapes, it aids in keeping the hands in good condition for the next day's work.

The Go-Jo Heavy Duty Dispenser cuts handcleaning costs up to 75% by delivering the right amount of Go-Jo Creme Hand Cleaner for a quick, thorough clean-up. Precision engineering eliminates waste.

THIS go·jo TEAM COMBATS DIRT AND DERMATITIS WITH A SOLID ONE-TWO PUNCH!

FOR MORE INFORMATION WRITE:

GOJER, INC. Box 991 Akron 9, Ohio

MANUFACTURER OF go·jo PRODUCTS

2759

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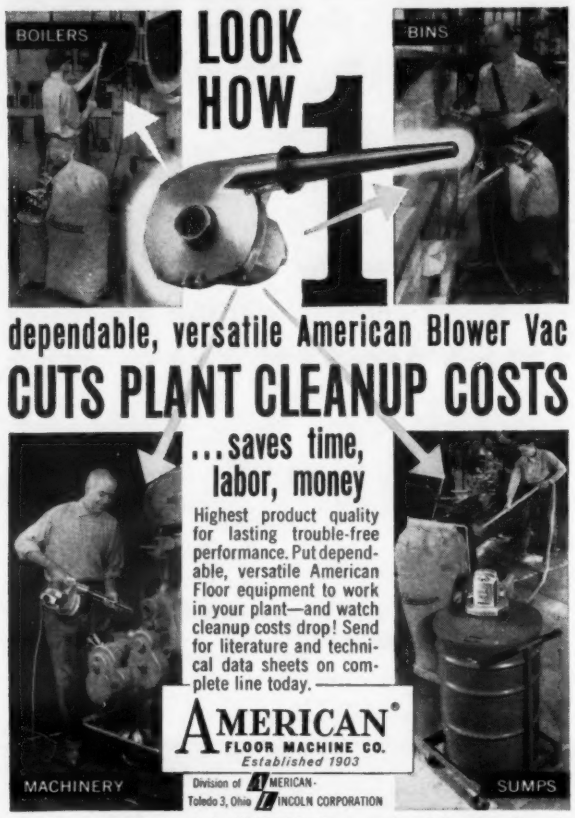

dependable, versatile American Blower Vac

CUTS PLANT CLEANUP COSTS

...saves time, labor, money

Highest product quality for lasting trouble-free performance. Put dependable, versatile American Floor equipment to work in your plant—and watch cleanup costs drop! Send for literature and technical data sheets on complete line today.

AMERICAN® FLOOR MACHINE CO. Established 1903

Division of AMERICAN-LINCOLN CORPORATION, Toledo 3, Ohio

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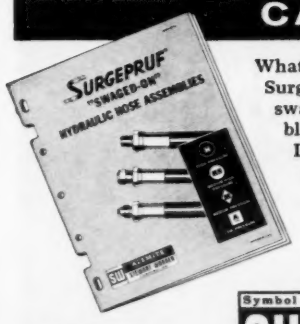
NOW YOU CAN ORDER "SWAGED-ON" HYDRAULIC HOSE ASSEMBLIES TO YOUR EXACT SPECIFICATIONS FROM THIS

FREE SURGEPRUF® CATALOG!



Whatever the industry application, Surgepruf will furnish the finest swaged-on hydraulic hose assemblies to meet your specific needs. Low, medium, medium-high and high pressure assemblies are available. All are factory assembled and provide a leakproof fluid seal with no braid exposure.

Send for this FREE, illustrated catalog —#40-37—for a full description of the complete Surgepruf line.

Symbol of SW Excellence — ALEMITE DIVISION STEWART-WARNER CORPORATION

Dept. AK-71, 1850 Diversey Pky., Chicago 14, Ill.

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LOAD and UNLOAD

BOXES • BAGS • BALES • CARTONS

IN 1/2 THE TIME

with this expanding CONVEYOR

CSI-Farquhar's EXPAND-O-VEYOR

- BUILT-IN STRETCH
- HIGHLY VERSATILE
- HIGH SPEED
- EASY TO MOVE
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Looking for a new way to speed loading and unloading? Here is a complete, *portable* conveyor system that helps you load trucks in ½ the time... no more slow and costly setup...just move in the EXPAND-O-VEYOR and go to work... links right into existing facilities. Investigate this higher efficiency now!

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A-B FARQUHAR DIVISION
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ASK FOR BROCHURE
Full of details on sizes, power, capacity, construction and applications. SEND TODAY!

See Your Yellow Pages For Your CSI-Farquhar Dealer or Write Direct

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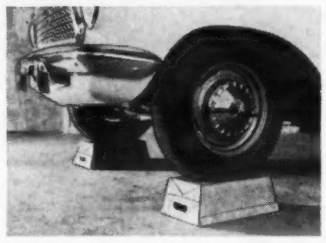
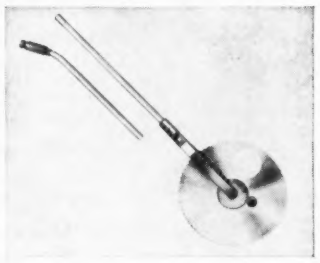
LOW COST TOTE BOXES
of rigidized corrugated board



As shown, the strength of this 8 x 14-in. Hevy-Duty tote box will support a load of 800 lb with only ½-in. compression. Boxes are made by chemically rigidizing a double-wall corrugated board structure. Upper edges are reinforced with built-in Chem-Board rims for added strength. These ½-cu ft boxes weigh 4 lb and cost $1.25 each in lots of a 1000. Boxes are produced in nesting, stacking, vertical sided, bin front, hopper front, and nestacking style. • **Convoy, Inc.,** 3461 Navarre Rd., Canton 6, Ohio.

▲ For more details circle NED-513 G1 on enclosed inquiry slip ▲

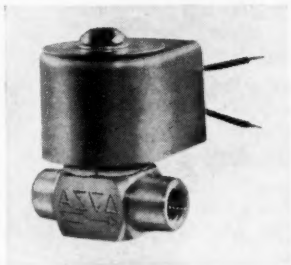
MEASURING WHEELS
register up to 300 and 1200 ft



Fast, accurate ground distance measurements can be made with this Foot Pacer measuring wheel which has a direct gear driven meter. Device is constructed of aluminum and has a collapsible handle with comfortable hand grip. Meter is reset quickly without rewinding. Wheel is skidproof to avoid skipping on ice or hard ground. Models A and B register up to 300 and 1200 ft, respectively, without resetting. • **Heritage Products, Inc.,** 626 N. Eighth St., Sheboygan, Wis.

▲ For more details circle NED-514 G1 on enclosed inquiry slip ▲

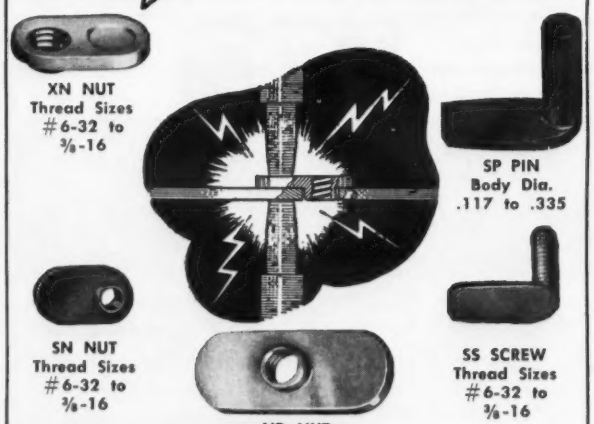
SOLENOID VALVE
two-way midget type is packless



Handling cryogenic liquids and gases is function of Bulletin 8262 midget packless type two-way solenoid valve. It is built to control flow from −100° F to −460° F. Valve is made of brass or stainless steel with Teflon discs and gaskets for operation in any position. Available pipe sizes are ⅛ and ¼ in. and orifice sizes are 3/64, 3/32, ⅛, 9/64, 3/16, and ¼ in. Standard and waterproof 10.5-w solenoid enclosures are offered. • **Automatic Switch Co.,** Hanover Road, Florham Park, N. J.

▲ For more details circle NED-515 G1 on enclosed inquiry slip ▲

OHIO SPOT WELDING FASTENERS



If you do spotwelding you can attach OHIO Spot-weld Fasteners at the same time for faster, trouble-free assembly.

Samples and information available upon request.

The OHIO WELD FASTENERS Primary Fastener in Fastener Assemblies

THE OHIO NUT AND BOLT CO.
14 FIRST STREET BEREA, OHIO

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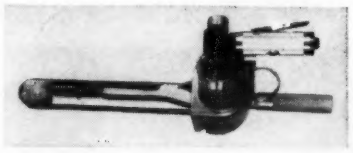
PORTABLE SUMP PUMP
for sludge, chemicals, oil, water

Body, impeller, and strainer of the SPB-25 portable air-driven sump pump are made of bronze to resist corrosion and insure spark-free operation. It safely handles chemical solutions and inflammable or explosive liquids, plus sewage, sludge, oil, and clean or dirty water. Double sealed heavy duty thrust and radial bearings support the two-part nonclogging impeller, mounted on a stainless steel shaft. The 19⅜-in. high pump can be passed through a 10 x 12-in. hole and will pick up any liquid over 1⅜ in. deep. Solids over ¾ in. are blocked by an integral bronze strainer. • **Schramm, Inc.,** 900 E. Virginia Ave., West Chester, Pa.

▲ For more details circle NED-517 G1 on enclosed inquiry slip ▲

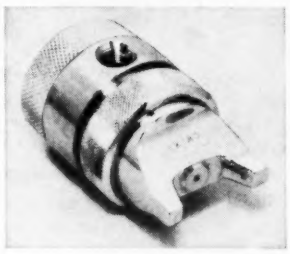
SABER BELT SANDER
air tool reaches inside contours



Weighing 9 lb, this pneumatic Rotor M1226 saber belt sander will reach inside edge areas on contoured die castings. Unit uses 1 to 2-in. wide abrasive belts and operates at speed of 6200 fpm, with a governed motor. Center distance between 2-in. diameter pulleys is 13⅝ in. Sander has belt tracking adjustment, with spring-loaded maximum belt tension of 40 lb. • **Rotor Tool Co.,** 26300 Lakeland Blvd., Cleveland 32, Ohio.

▲ For more details circle NED-518 G1 on enclosed inquiry slip ▲

AUTOMATIC SPRAY GUN
has ⅛-in. air, liquid connections



Lubricating dies and molds; spraying chemicals, dyes, adhesives, and silicones; spray cooling; and spraying stains, paints, and other finishes are uses for the Model 2277 automatic spray gun. Its 1⅝ x 3-in. size makes it suitable for use where space is a problem. Gun has ⅛-in. air and liquid connections, set screw needle adjustment, choice of nozzle combinations, and stainless steel body, needle, and nozzle. Price is $45. • **Spray Engineering Co.,** 100 Cambridge St., Burlington, Mass.

▲ For more details circle NED-519 G1 on enclosed inquiry slip ▲

GEARED TO HANDLE PUMPING PROBLEMS

THE VIKING "GEAR-WITHIN-A-GEAR" PUMPING PRINCIPLE helps engineers solve a wide range of pumping problems throughout the world. In the petroleum industry, chemical processing, food processing, meat packing, road building and many other industries, **VIKING PUMPS** handle liquids and semi-solids efficiently and at low cost. And **VIKINGS** pump liquids ranging from thin, liquefied gas to thick, viscous tars. Originated 50 years ago, the **VIKING** pumping principle has been adapted so successfully to so many applications that **VIKING** is now the largest exclusive rotary pump manufacturer in the world.

You men who specify and buy rotary pumps, can select from a complete size range of **VIKING PUMPS,** from ½ to 1050 G.P.M. in over 850 catalogued models and thousands of special designs. If you have a pumping problem, tell us . . . and ask for catalog 61SG.

VIKING PUMP COMPANY, Cedar Falls, Iowa, U. S. A. In Canada, it's **"Roto-King"** Pumps.

See Our Catalog In Sweet's Plant Engineers File

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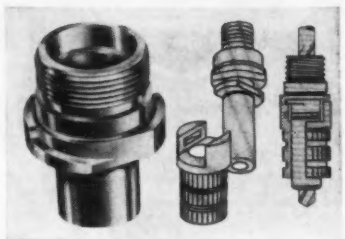
DRILL BUSHING TIP
screws into nose end of drill unit



Rapid and accurate method for mounting of portable or stationary air feed drilling, tapping, back spotfacing, or other self-contained machining units on a jig or fixture is provided by the Ace-Keller drill bushing tip. Locking flanges on the tip fit firmly on the jig, holding the drilling unit in alignment and absorbing both thrust and torque. Also available are adapter tips and lock liner bushings for embedment in plastic, Fiberglas, or other soft, nonferrous materials. They are used with Keller, Aro, Buckeye, Quackenbush, and other standard automatic feed drill motors. • **Ace Drill Bushing Co.**, 5407 Fountain Ave., Los Angeles 29, Calif.

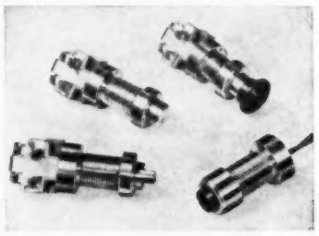
▲ For more details circle **NED-521 G1** on enclosed inquiry slip ▲

MECHANICAL LIMIT STOP
sets for 1-1500 shaft revolutions

Low starting and running torque and minimum reflected inertia are characteristics of this multiturn mechanical limit stop which can be set for any number of shaft revolutions from 1 to 1500. Unit is easily incorporated in servo gear trains ranging from instrumentation types to large power systems. It is encased in anodized aluminum, measures 3¼ x 2¼ x 1 1/16 in., operates at up to 1800 rpm, and meets military specifications. • **Computer Sciences, Inc.**, 603 Main St., Westbury, N. Y.

▲ For more details circle **NED-522 G1** on enclosed inquiry slip ▲

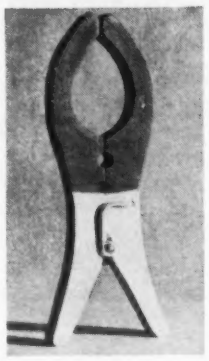
EXPLOSIONPROOF CONTROLS
pushbuttons, selectors, pilot lights



Line of explosionproof pushbuttons, selector switches, and pilot lights are suited for use with NEMA 7 or 9 pushbutton stations where explosive gases or combustible dusts are prevalent. Both standard and mushroom head pushbuttons, two and three-position selector switches, and torpedo type pilot lights comprise these controls. All have silver-to-silver contacts and are heavy-duty rated. They feature machined aluminum housings and bright anodized retaining rings, and include colorful units with separate name plates, plus pilot lights in seven colors. Explosionproof pushbutton station enclosures from 1 through 85 units in size are also available along with other accessories and modifications. • **Gemco Electric Co.**, 25685 W. Eight Mile Rd., Detroit 40, Mich.

▲ For more details circle **NED-523 G1** on enclosed inquiry slip ▲

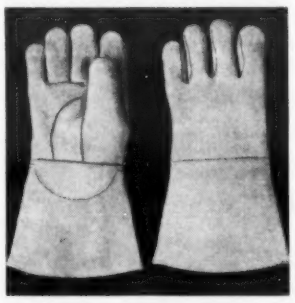
NONSLIP CLAMP
is neoprene coated



Though developed for use by electric utilities for high voltage work, Bulldog rubber-coated nonslip clamps are suited for other holding work. Clamps are coated by dipping the wooden clamp in a roughening solution of neoprene and then cured. They are resistant to oil, water, and chemicals, and are good insulators. • **Charleston Rubber Co.**, 18 Stark Industrial Park, Charleston, S. C.

▲ For more details circle **NED-525 G1** on enclosed inquiry slip ▲

WELDING GLOVES
soft deerskin type resists heat



Long wearing welding gloves of Brazilian deerskin have a 6½-in. long cuff for arm protection and a large pull-patch protecting the threads that join the cuff and glove. Soft, heat resistant gloves have welted seams where metal flow is heaviest. Back of the hand is lined for insulation and perspiration absorption, and the cuff is lined with lightweight suede to prevent chafing. • **Riegel Textile Corp.**, 260 Madison Ave., New York 16, N. Y.

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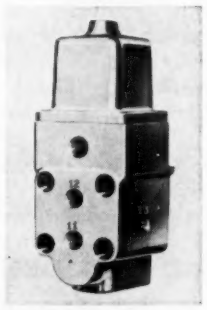
PILOT VALVES
solenoid operated directional type



Flow areas equivalent to ⅜-in. XH size tubing, alloy iron bodies, alloy steel plungers, and multiple balance and lubricating grooves are features of a line of fluid power pilot (directional) valves. They are operated by a totally enclosed solenoid, sealed against moisture and contaminated atmospheres. Provision for manual operation is incorporated. All sizes have ⅜-in. pipe taps and are suited for pressures up to 3000 psi. Bracket mounted pilot valves with ⅜-in. pipe tap ports and 3⅜-in. mounting bolt circle have normally-open or normally-closed two and three-way plungers. Similar panel mounted units are also available. Pilot "operator" valves with 3⅜-in. mounting bolt circle are standard, and are suited for use on two, three, and four-way directional control valves, foot valves, and surge valves. Over-all size is 11 x 4 x 4 in. • **Oilgear Co.**, 1571C W. Pierce St., Milwaukee 4, Wis.

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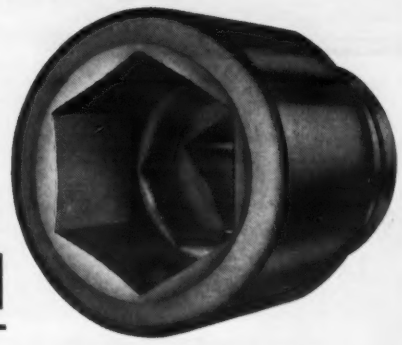
Snap-on Sockets

BUILT EXTRA TOUGH



for impact use

SNAP-ON industrial sockets have the toughness and wearability that gives you extra nut-turning hours per socket . . . cut your tool costs . . . contributes to more efficient work time.

Many styles available — sizes from 3/16 inch to 5-5/8 inches. Ask your SNAP-ON man — or write direct for new catalog.

FOR ALL INDUSTRY

SNAP-ON TOOLS

8110-G 28th AVENUE • KENOSHA, WISCONSIN

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NOW YOU CAN PAINT OVER RUST

Brush or spray OSPHO on rusted metal.

Apply OSPHO® on rusted metal after simply wire-brushing loose rust. OSPHO chemically changes rust into iron phosphate and stops further rust action. Resulting inert surface is an excellent base for maintenance paint. Paint jobs last longer, as proved by repeat orders over past 12 years.

Non-toxic, non-flammable. A gallon treats up to 600 sq. ft. Treats new metal too — prepares galvanized and aluminum surfaces for paint.

1-gal. bottles (cases of 4) @ $3.50 per gal.
5-gal. pails @ $3.40 per gal. • 50-gal. bbls. @ $3.00 per gal.
F.O.B. CLEVELAND

NO-RISK OFFER. Order 5 gallons. Try OSPHO. If it does not do what we claim, *we'll cancel the invoice.*

RUSTICIDE PRODUCTS COMPANY
3131 Perkins Ave., Cleveland 14, Ohio
Quality Maintenance Products Since 1917

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Here is the pair for clean, dry air . .

JOHNSON AFTERCOOLER
Used where moisture is vaporized by the heat of compression. Circulates cooling water around the line, condenses the oil and water vapor so Separator can remove them. Simple in design, highly efficient in performance.

SIZES FOR ALL NEEDS

JOHNSON SEPARATOR
Removes more than 99% of all water, dirt and oil from compressed air or steam. Combines the *two* best principles of separation—first allows air to expand slightly, then changes flow direction with the "Thousand Baffles". Model illustrated is the newest idea in separator design, with self-draining trap mechanism built right in.

WRITE FOR BULLETIN

The Johnson Corporation
812 Wood Street Three Rivers, Michigan

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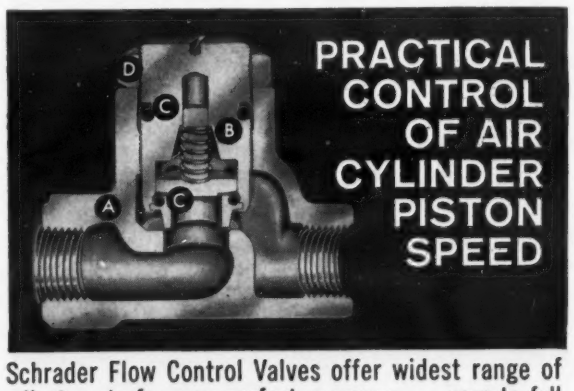

PRACTICAL CONTROL OF AIR CYLINDER PISTON SPEED

Schrader Flow Control Valves offer widest range of adjustments for near perfect accuracy . . . zero to full

USE: In the inlet port of single acting cylinders to reduce piston speed while maintaining driving force . . . in exhaust ports of double acting cylinders to meter exhaust air and control cylinder piston speed accordingly.

FEATURES: Vernier-like screw adjustment, with fine thread, is not oversensitive to slight adjustment and can be adjusted quickly and accurately. Large tapered seat is self-cleaning. Suitable for air pressures to 400 psi. and oil or water pressures to 800 psi. Five sizes ⅛" to ¾".

CONSTRUCTION: See illustration. A . . body of cast brass to withstand abuse. B . . compact plunger assembly is replaceable in one unit. C . . airtight "O" ring . . . or seal. D . . heavy duty lock nut holds adjustment under vibration and shock.

CONSULT YELLOW PAGES FOR YOUR NEARBY DISTRIBUTOR OR WRITE

Schrader® a division of SCOVILL
A. SCHRADER'S SON
Division of Scovill Manufacturing Co., Inc.
459 Vanderbilt Ave., Brooklyn 38, N. Y.
QUALITY AIR CONTROL PRODUCTS

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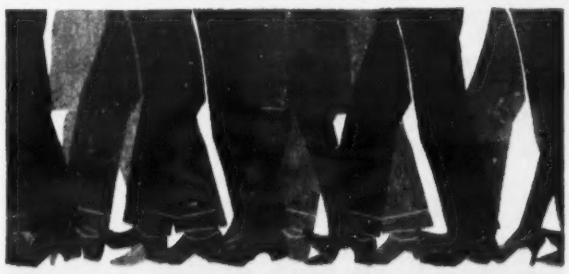

GRATING FOR HEAVY FOOT TRAFFIC

WRITE FOR NEW BULLETIN NO. 2595

Blaw-Knox 36-Bar Grating is designed especially for heavy foot traffic locations, such as ventilators or sidewalk openings. Bearing bars are only ½" apart—only ⅜" apart in 37-bar grating. Close mesh design is more comfortable, safer for standing or walking, yet gives plenty of space for ventilation, light passage and self-cleaning. Write Blaw-Knox Company, Pittsburgh 38, Pa.

BLAW-KNOX **BLAW-KNOX** *GRATING*

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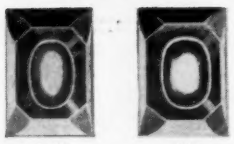
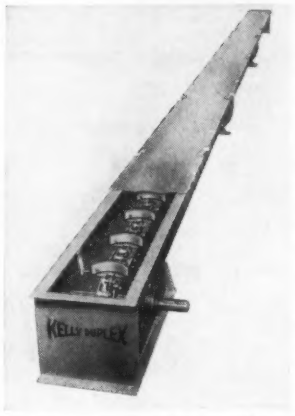
For more details circle NED-532 G1 on enclosed inquiry slip

PANNIER STEEL STAMPS:
you won't buy them so OFTEN, but you'll always buy *PANNIER*

NEW OLD
This stamp made good, clear impressions after 30,000 hammer blows!
Pannier Steel Figure and Letter Stamps are *intentionally* made for a long life of good, clear impressions. Try a set and see! Write for sizes and prices.
You can get the same high Pannier quality in special design stamps, inspectors' hammers and holders with changeable steel stamping type.
PANNIER MASTER MARKERS
327 PANNIER BLDG., PITTSBURGH 12, PA.
For more details circle NED-533 G1 on enclosed inquiry slip

TYGON®
means longer lasting protection against acid or alkali attack

If acid or alkali fumes make maintenance painting a never-ending headache, it's time to switch to Tygon. For more than twenty years, these famous specialty coatings have been protecting chemical plants everywhere. Resist acids, alkalies, alcohol, oils, greases. Apply by spray or brush. Air dries quickly.
164-G
Write for this Manual
Bulletin 760 tells where and how to use Tygon.
Plastics & Synthetics Division
U. S. STONEWARE
AKRON 9, OHIO
For more details circle NED-534 G1 on enclosed inquiry slip

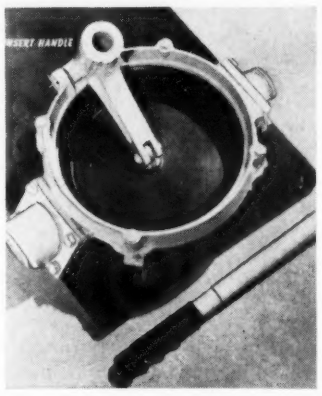
CHAIN FLIGHT CONVEYOR for granular, free-flowing material



This chain flight conveyor handles all types of granular, free-flowing materials along a horizontal or inclined path at rates up to 16,000 cfh, depending upon its size and chain speed. The bed consists of a single strand of combination chain on which trough - shaped metal flights are spaced at even intervals. These flights keep the trough wiped clean as they move the material. Degradation is held to a minimum. They can be built in any length with 9 to 24-in. wide trough, can have any number of intermediate discharges, and can be equipped with standard or variable speeds drives. • **Duplex Mill & Mfg. Co.**, 1626 Sigler St., Springfield, Ohio.

For more details circle NED-535 G1 on enclosed inquiry slip

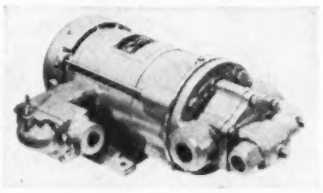
SELF-PRIMING HAND PUMP delivers 30 gpm of water, slurries



Water, chemicals, petroleum products, and sewage are moved at up to 30 gpm by this gallon-per-stroke self-priming hand pump. It will handle a high percentage of solids and can thus be used for muddy water, slurries, and septic waste. An interior plastic coating is furnished at slight extra cost for pumping corrosives. The cast aluminum unit has neoprene diaphragm and valves and weighs 20 lb, including handle and base. It lists for $58. • **Protek Specialty Co.**, Box 194, Bellaire (Houston), Tex.

For more details circle NED-536 G1 on enclosed inquiry slip

MOTOR-MOUNTED ROTARY PUMPS for clean liquids and solvents

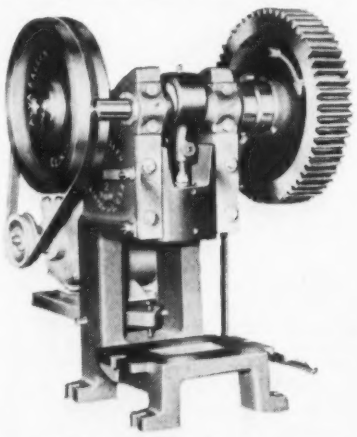


Delivery rates from 10 to 30 gpm at pressures to 125 psi are provided by MX and MXS Series motor-mounted rotary pumps. The pump and motors are integral with the common shaft supported by the motor bearings. Discharge can be left, right, up or down by simple repositioning of the head. They have a built-in safety by-pass. Sizes range from 1 to 1½ in. with any of five explosionproof motors rated from ¾ to 3 hp. • **Blackmer Pump Co.**, 1809 Century Ave., Grand Rapids 9, Mich.

For more details circle NED-537 G1 on enclosed inquiry slip

PUNCH PRESSES for deep drawing and forming

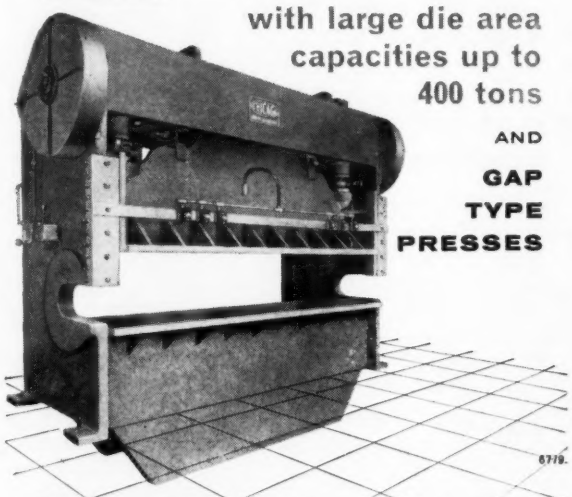
Slow, powerful strokes and efficient application of flywheel inertia are obtained on this line of back geared punch presses, easily changed from repeat to nonrepeat action.



Six standard models have 2, 3, 5, 8, 12, and 25-ton capacities. All have a 100 - stroke - per-minute rate, but this can be varied by using motor pulleys of different sizes. Respective throat depths are 3¼, 12, 4, 5, 5, and 8 in., and maximum stroke lengths are 1½, 1½, 2, 3, 3, and 4 in. Prices range from $195 to $1847.50, less motor. • **Alva Allen Industries**, Punch Press Div., 1001-15 N. Third St., Clinton, Mo.

For more details circle NED-538 G1 on enclosed inquiry slip

For more details circle NED-539 G1 on enclosed inquiry slip

CHICAGO DREIS & KRUMP
PRESSES
STRAIGHT-SIDE TYPE
with large die area capacities up to 400 tons
AND
GAP TYPE PRESSES

Complete recommendations for any job on request
Press Brakes • Straight-Side-Type Presses • Press Brake Dies
Hand and Power Bending Brakes • Special Metal-Forming Machines
DREIS & KRUMP MANUFACTURING CO.
7436 South Loomis Boulevard, Chicago 36, Illinois
For more details circle NED-540 G1 on enclosed inquiry slip

How to select WORM GEAR Drives
FREE TO DESIGN ENGINEERS

NEW Bulletin 218
Complete up-to-date information on Cone-Drive double-enveloping worm gear drives. Provides all specification data plus "how to select and order".
CONE-DRIVE GEARS
DIVISION MICHIGAN TOOL COMPANY
7171 E. McNichols Rd. • Detroit 12, Michigan
For more details circle NED-541 G1 on enclosed inquiry slip

...Fluid Power news

Four, factual, application-engineering reports—complete with diagrams—describe Oilgear "Any-Speed" Drives at work.

1: Oilgear "Any-Speed" HYTAC Drives on new Foil Laminating and Coating machines at *Anaconda Aluminum Co.*

2: Oilgear Servo Valve Controlled Dynamometer and Starter Systems at *Esso Research and Engineering Corporation.*

3: Oilgear Electrohydraulic Controlled "Any-Speed" Drives on sea duty on ASROC Missile Launchers.

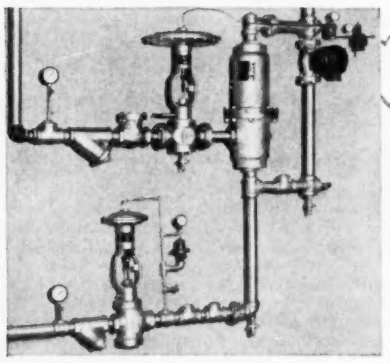
4: Oilgear "Any-Speed" Drive Systems on *Schmutz* 6-color Printing Presses.

Request Oilgear Fluid Power News 16.

THE OILGEAR COMPANY
Application-Engineered Fluid Power Systems
1582 WEST PIERCE STREET • MILWAUKEE 4, WISCONSIN
For more details circle NED-542 G1 on enclosed inquiry slip

HOT WATER INSTANTLY

Accurate Temperatures . . .
Low Cost . . . Any Quantity from 500 to 50,000 Gallons Per Hour!



Pick STEAM INJECTION

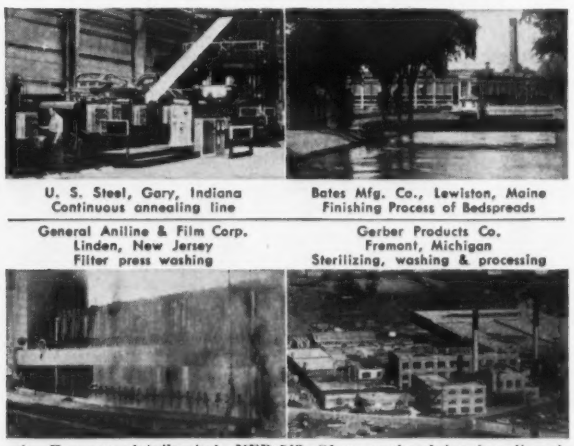
WATER HEATERS for high or low pressure steam

Direct contact of steam and water in the Pick patented mixing chamber produces hot water at the desired temperature, and in the required quantity, *instantly!* There's no time lag . . . no steam wasted to maintain heat in stored water . . . steam used only as hot water is drawn. Water temperature maintained within 3° plus or minus. Volume adjustable from 5% to full rated capacity. Pick heaters require no floor space . . . usually installed on wall. Whatever your hot water needs are, Pick will do it faster, more accurately and at lower cost!

FREE CATALOG—Contains complete information and specifications. Write today to Dept. P.

Pick WATER HEATERS
PICK Manufacturing Co.
Water Heater Division
WEST BEND, WISCONSIN

Used by America's Leading Industries:



U. S. Steel, Gary, Indiana — Continuous annealing line
Bates Mfg. Co., Lewiston, Maine — Finishing Process of Bedspreads
General Aniline & Film Corp., Linden, New Jersey — Filter press washing
Gerber Products Co., Fremont, Michigan — Sterilizing, washing & processing

For more details circle NED-543 G1 on enclosed inquiry slip

SCAFFOLD LOAD SUPPORT accessory has T and Y support heads

Lighting fixtures, conduit, piping, and other materials can be supported at above-floor levels by the Hold-A-Load accessory which locks into Baker scaffold end frames. It is adjustable in height through a telescoping upper section. A T-head for electrical, mechanical, maintenance, lathing, acoustical, and drywall work and a Y-head for holding pipe, duct, and similar objects are available. • **Baker-Roos, Inc.**, Dept. HL-203, 602 W. McCarty St., Indianapolis 6, Ind.

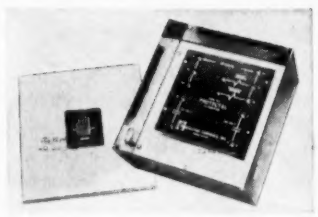
For more details circle NED-544 G1 on enclosed inquiry slip

VOLTAGE & AMPERAGE METER for cathodic protection rectifiers

Now standard on Good-All cathodic protection rectifiers is the Cyclops Eye meter scale which reads in amperes and volts. The 4-in. scale is designed to speed checking time and increase accuracy. Switching circuit operation provides lightning damage protection and reduces replacement costs. Scale is colored keyed to the single switch, with red scale reading amperes, and the lower blue scale reading volts. • **Good-All Electric Mfg. Co.**, Ogallala, Nebr.

For more details circle NED-545 G1 on enclosed inquiry slip

ALTERNATING CONTROL actuates duplex equipment



Safe, reliable actuation of duplex fluid system pumps in air conditioning equipment, and other duplex equipment is performed by the Protectal Alternator. The simple, yet fool-proof, alternating device requires no lubrication or adjustments and is mounted on a single, removable panel. It is controlled by conventional float controls, pressure switches, thermostats, or probes, and its two solenoids operate separate pump switches at preset time intervals, or when specific fluid levels are reached. In on/off pumping applications, if pump fails, the alternator actuates a second unit which takes over every cycle until defective pump is replaced. Control is offered for 115, 230, or 460-v ac operation, and lists for $65. • **Protection Controls, Inc.**, 7317 N. Lawndale Ave., Skokie, Ill.

For more details circle NED-546 G1 on enclosed inquiry slip

ABRASIVE CUTOFF SAW takes up to 20-in. abrasive wheels

Pipes and shapes in sizes up to 6 in. and solid ferrous and nonferrous materials up to 4 in. are cut by the Abr-A-Saw. It employs abrasive wheels in 14, 16, 18, or 20-in. sizes and motors up to 10 hp. The lightweight, portable model may be mounted on a bench with lever-controlled chain vise or on a stand with foot pedal assembly, leaving the operator with both hands free. Height without stand is 30 in. and with stand is 60 in. A Hi-Boy model with 12-in. pipe cutting capacity, a steel cutting blade, and an oil spray attachment for cutting nonferrous materials is also available. Optional equipment includes air vise, work length indicator, magnetic pushbutton starter, swivel hand vise, automatic air feed, and adjustable long-length support. • **Collins Machinery Corp.**, 955 Monterey Pass Rd., Monterey Park, Calif.

For more details circle NED-547 G1 on enclosed inquiry slip

FLAMELESS BLOW TORCH

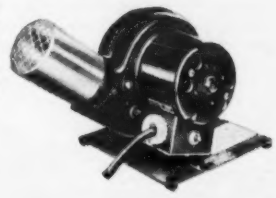
FOR QUICK HEAT UP TO 1000° F.

For applications requiring quick concentrated heat blast up to 1000° F. without flame. Soften, form, mold and patch plastics, etc. Temperature varied by air intake adjustment. 110-230 V. AC-DC motor, 2 or 3 wire plug, 8 ft. heavy duty cord. Intermittent duty.

Other models available with lower temp. ranges

Most of the big names in industry use MASTER in laboratories or in production Model 12750—110 volt.

AIR HEATER BLOWER



For quick electrically heated air up to 750° F. For accelerating drying processes or for localized heating. B.T.U. 3400. Air velocity 2000 FPM. 110-230 V. AC only, 2 or 3 wire plug, 8 ft. heavy duty cord. Continuous duty. 2" dia. x 3" long discharge nozzle.

300° F.
500° F.
750° F.

Write today to Dept. 91-G

MASTER Appliance Corp., Racine, Wisconsin
For more details circle NED-548 G1 on enclosed inquiry slip

ASSURED HAND PROTECTION

CHARLESTON CHARCO RUBBER CO.

CHARCO "NEO-SOL" ALL MILLED NEOPRENE RUBBER GLOVES

CHARCO "HY-SOL" BUNA N SYNTHETIC RUBBER GLOVES

BOTH GLOVES MADE BY THE MULTIPLE DIP CEMENT PROCESS—NOT LATEX COAGULATION

"Neo-Sol" gloves offer dependable protection from most industrial chemicals and solvents.

"Hy-Sol" gloves offer premium protection from organic solvents and industrial chemicals.

Write for NEW INDUSTRIAL GLOVE CATALOG

CHARLESTON RUBBER COMPANY
18 STARK INDUSTRIAL PARK CHARLESTON, S. C.

For more details circle NED-549 G1 on enclosed inquiry slip

NEW EASY TO USE

STEEL **GRATING CATALOG** SEND NOW FOR YOUR **FREE** COPY

Dept. N-7 KERRIGAN IRON WORKS CO. Nashville, Tenn.
NAME _____
FIRM NAME _____
CITY _____ STATE _____

For more details circle NED-550 G1 on enclosed inquiry slip

NICE "specials" provide the Product Designer with exceptional opportunities for cost reduction and product improvement. The properly designed "special" not only performs its basic bearing function, but may incorporate features that simplify mounting or installation, or combine several components into a single interchangeable "package" unit. NICE engineers are well qualified to design bearings that will fulfill particular application requirements . . . economically and efficiently.

Can NICE help you?

NICE BALL BEARING CO.
NICETOWN • PHILADELPHIA • PENNSYLVANIA

For more details circle NED-552 G1 on enclosed inquiry slip

FREE RELAY LITERATURE!

New brochures and application data are now available on the electro-pneumatic AGASTAT . . . the most reliable line of instant recycling time/delay/relays for critical system control. Two popular industrial types are shown above:

Dial head model with calibrated head, offers linear adjustment over full range in one revolution. Five range options — from .05-sec. to 15 or more minutes.

New front needle valve model provides full span adjustment from .15-sec. to 5 minutes or more in one unit.

Both units are supplied in a wide range of AC or DC operating voltages . . . SPDTDB or DPDTSB contacts . . . with time delay on pull-in or drop-out.

Write today to Dept. 13-107 for detailed specifications and *Application Data* sheets showing interesting uses for these high-reliability relays.

AGASTAT TIMING INSTRUMENTS
ESNA ELASTIC STOP NUT CORPORATION OF AMERICA
ELIZABETH DIVISION • ELIZABETH, NEW JERSEY

IN CANADA: ESNA CANADA, LTD., 12 GOWER ST., TORONTO 16, ONTARIO, CANADA

For more details circle NED-553 G1 on enclosed inquiry slip

ACRAWATT "PRECISION IN HEAT"

SPEEDEGREASER

uses SAFE-MORE EFFECTIVE PERCHLORETHYLENE SOLVENT VAPOR

Degreases 100-125 lbs. metal parts per hour. Rapid electrical heating. Rapid recovery. THERMOSTATICALLY CONTROLLED. Operates on 115—230 Volts A.C.

18" DIAMETER UNIT
Only $94.50 COMPLETE
F.O.B. FRANKLIN PARK, ILL.

Soon pays for itself. Small shops find its low cost attractive. Large plants using one in each department where needed find central degreasing facility unnecessary. All agree it's EFFICIENT . . . FAST . . . CONVENIENT . . . SAFE . . . ECONOMICAL . . . RUGGED—a big improvement.

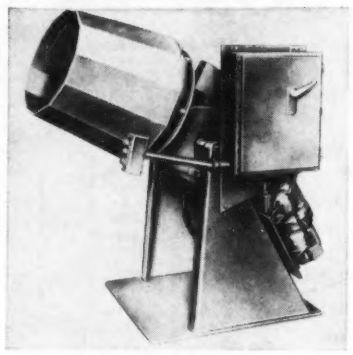
FOR immediate shipment or further information—Write

SERIES D-2

ACRA ELECTRIC CORP.
9907 PACIFIC AVENUE
Franklin Park, Illinois

For more details circle NED-554 G1 on enclosed inquiry slip

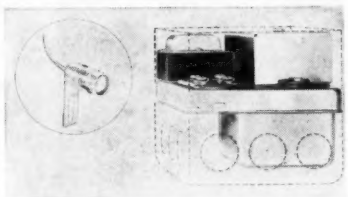
BARREL FINISHERS
electric, hydraulic tilting types



Work load capacities range from 500 to 815 lb depending upon the size, type, and shape of barrel on these improved barrel finishing machines. Hydratilt model has a manual hydraulic device for raising the barrel 40 degrees above horizontal and 35 degrees below horizontal. With a bottle type barrel, tilting to 50 degrees below horizontal is possible. Tilting is by means of a standard hydraulic hand pump. Electratilt model has the same tilt range, and is actuated by a gear-motor and chain drive. • **Baird Machine Co.**, 1700 Stratford Ave., Stratford, Conn.

For more details circle NED-555 G1 on enclosed inquiry slip

OIL BURNER CONTROL
is photoelectric safety device



Flame detector and compact primary unit are two parts of the Type 668 Kwik-Sensor oil burner primary control which has the same operating features of the original Type 660 Kwik-Sensor control. So compact that it mounts on a 4 x 4-in. junction box, the unit weighs 2 lb 6 oz. Flame detector is a cadmium cell which reacts only to the radiant rays from the oil flame, not to heat. This permits mounting at the blower end of the burner where it operates in a cool, clean atmosphere. No adjustments are necessary. Primary control may be mounted in or on the burner, in the furnace or boiler vestibule, or any other convenient location. Instantaneous response to both flame ignition or extinction are provided. • **White-Rodgers Co.**, 9797 Reavis Rd., St. Louis 23, Mo.

For more details circle NED-556 G1 on enclosed inquiry slip

Handbook of Compressed Air & Gas

All phases of the compressed air and gas industry are covered in 592-page third edition of the "Compressed Air & Gas Handbook." Data are presented in curves or tables to facilitate their use. Such subjects as centrifugal compressors, multiple pneumatic tools, automatic feeds, and air gaging are discussed. This book is designed as a complete reference work on the subject. Price is $8. Published by the **Compressed Air & Gas Institute**, 12th floor, 55 Public Square, Cleveland 13, Ohio.

For more details circle NED-557 G1 on enclosed inquiry slip

NEW
FAS-LOK STORAGE RACK

- ONLY 2 BASIC PARTS . . . QUICK ERECTION
- NO WEDGES . . . NO BOLTS, NUTS, OR TOOLS REQUIRED
- SAFE . . . RUGGED . . . COMPLETELY ADJUSTABLE
- Easy access — front or rear.

FAS-LOK Racks can be quickly assembled into unlimited combinations of height, length, and shelf opening. Rigidly braced end frames, in standard heights from 5′ to 22′ 6″, have slots punched in uprights on 3″ centers. Horizontal runners have hookplates at each end. Each hookplate has two tapered ears which fit slots of upright (inset). To assemble FAS-LOK Racks, ears are set into the wedge-shaped slots on upright and a tap on horizontal runner drives ears down, seating them securely in a wedging action to produce a rock-solid rack. Can be used to store any material—Pallets, Skids, Rolls, Bulk storage, etc.

Horizontal runners available in lengths to 20 ft.; End Frames in depths from 2′ to 5′. End Frames made in capacities to 40,000 lbs. *Write for Catalog*

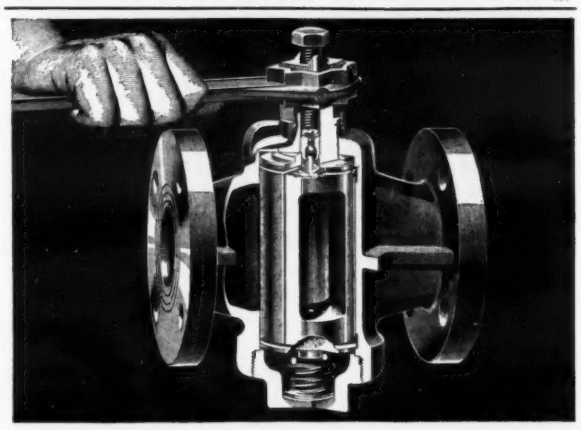
CHICAGO TRAMRAIL DIVISION
CONCO ENGINEERING WORKS INC.
1310 S. KOSTNER AVE. CHICAGO 23, ILLINOIS
Division of CONCO ENGINEERING WORKS, INC.

For more details circle NED-558 G1 on enclosed inquiry slip

■ Now . . . You can get Versa Valves with Explosion Proof Solenoid actuation. This new actuator is available on any series "V" and "T" Valves in sizes from ⅛″ NPT to ½″ NPT in 2-, 3-, 4- and 5-way types, in side port models or sub-plate models for manifold mounting, and for pressures from partial vacuum to 500 PSIG. ■ These superior valves are completely enclosed units, having no external moving parts and they are virtually trouble free. ■ All Versa Valves are triple pressure and functionally tested under water for guaranteed leakproofness. ■ For complete information write today for Bulletin #660.

VERSA Valves
VERSA PRODUCTS COMPANY, INC.
150N COOLIDGE AVE., ENGLEWOOD, NEW JERSEY

For more details circle NED-559 G1 on enclosed inquiry slip



HOMESTEAD® LUBRICATED PLUG VALVES

. . . performance you can put your hand on

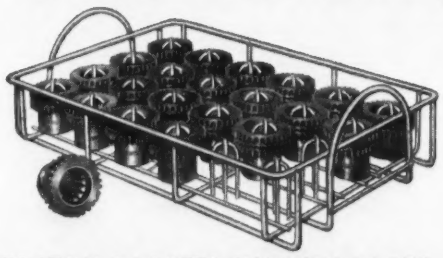
When you operate a Homestead Lubricated Plug Valve, you know that positive low-cost fluid control is at your fingertips. This Homestead Valve is built to very close tolerance, vital to long, effective operation—.002″ maximum tolerance on sizes to 2″ and .003″ to .005″ on larger sizes. Its *controlled* high pressure lubricant system guarantees complete coverage of sealing surfaces; protection against corrosion; no contamination of line fluids; and no sticking, thanks to the downward movement of plug during lubrication. Get the full story in our free Reference Book 39-1. Write today.

hv HOMESTEAD VALVE MANUFACTURING CO.
"Serving since 1892"
P. O. Box 84, Coraopolis, Pennsylvania

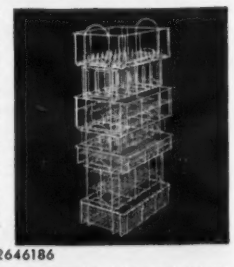
Makers of: Homestead Ball Valves; Cam-Seald, Lever-Seald, and Lubricated Plug Valves.

For more details circle NED-560 G1 on enclosed inquiry slip

EEZY-STAK BASKETS
for Better Parts Handling



EEZY-STAK BASKETS SIMPLIFY PARTS HANDLING...CUT COSTS...REDUCE REJECTS!



WIPCO manufactures a complete line of Custom-Designed stacking (Eezy-Stak) and non-stacking baskets for handling all types of parts through every production and assembly process. WIPCO baskets can be made in any desired size or shape, and from any practical material.

Eezy-Stak baskets feature the exclusive Interlock Handle* which permits easy and safe stacking. Eezy-Staks are available in a wide range of standard sizes and metals which fit most parts-handling requirements. Write today for Bulletin B-54.

*Pat. No. 2646186

WIPCO BASKETS . . . *FROM INITIAL MACHINING TO FINAL ASSEMBLY AND SHIPPING*

WIRE AND IRON PRODUCTS INC.
1724 SIXTEENTH ST. • DETROIT 16, MICHIGAN

For more details circle NED-561 G1 on enclosed inquiry slip

Cost of air power?
LOW WITH Quincy

Every Quincy Compressor is designed with one purpose: to provide you with long, steady, reliable performance. Features like Safe-Q-Lube and Loadless Starting prevent major breakdowns, save maintenance time and costs. Quincy precision engineering assures maximum efficiency, cuts wear on vital parts. For all applications, your best buy is Quincy. Authorized Service available across the country—around the clock.

Models from 1 to 90 CFM. *Write for catalog.*

QUINCY COMPRESSOR CO., Dept. N-716, Quincy, Ill.

For more details circle NED-562 G1 on enclosed inquiry slip

BIRD DAMAGE USED TO COST MILLIONS

NEW MARK IX

BIRD REPELLER

360° REVOLVING LIGHT BEAMS

rout birds in warehouses, graneries, hangers, plants

Damage to steel, grain, plant equipment and warehoused goods totals millions of $$$ annually. NOW it's easy and inexpensive to get rid of birds for good . . . *results guaranteed!* Designed especially for indoor use, the MARK IX flashes 200 intense alternate-color beams per minute. Pounding light beams and frightening shadows chase the birds—prevent nesting and feeding. Corrosion-proof, lifetime housing; 115 V or 220 V; 1500 hour bulb; easily installed.

Write for free literature

TRIPP LITE

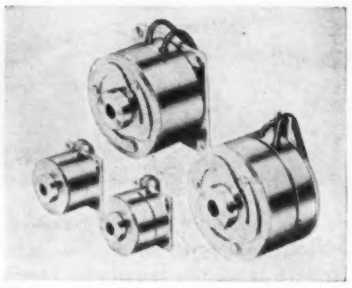
Famous Since 1922

Division of TRIPPE MFG. CO.

133 N. Jefferson St., Dept. NED, Chicago 6

For more details circle NED-563 G1 on enclosed inquiry slip

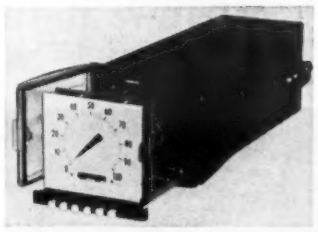
SMALL BRAKES & CLUTCHES in 2 and 10 lb-in. torque ratings



High torque per unit size is provided by line of fractional-horsepower electric brakes and clutches. Units are offered in 0.875 and 1.725-in. diameters rated 2 and 10-lb-in. torque, respectively. They are supplied for 28 or 90 v. Control units are available. Additional sizes will be available soon. • **General Time Corp.**, Haydon Div., 245 E. Elm St., Torrington, Conn.

For more details circle NED-565 G1 on enclosed inquiry slip

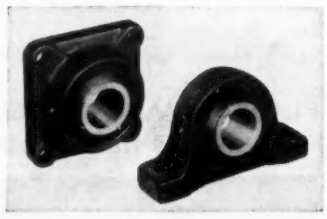
ELECTRONIC LEVEL INDICATOR for liquids and granular solids



All-electronic Series 959 capacitance type level indicator for liquids and granular solids accepts signals from various type probes and indicates and/or controls them in a receiver (shown). Probes may gage different materials, be of different lengths, and be located at varying distances up to 1000 ft from the instrument. Receiver employs solid state circuits of plug-in design, is accurate to within 1 per cent, and can accept signals from up to six different probes. It measures 16 x 6 x 6 in., is panel mounted, and operates on 115 v ac. • **Magnetic Instruments Co.**, 546 Commerce St., Thornwood, N. Y.

For more details circle NED-566 G1 on enclosed inquiry slip

SELF-ALIGNING SLEEVE BEARINGS for 5/8 to 3 15/16-in. shafts



Both flanged and pillow block types are available in this Flex-Block line of self-aligning self-lubricating sleeve bearings. The first are offered in sizes for 5/8 to 2 15/16-diameter shafts, and the second are made in 5/8 to 3 15/16-in. sizes. They will operate in ambient temperatures to 1000° F, under corrosive and contaminating conditions, in inaccessible locations where lubrication and maintenance are problems, where noise control is important, at slow speeds, and even under water. The sleeve bearing cartridge is held in the housing with a set screw which can be backed off to rotate the sleeve and almost double its life. • **Link-Belt Co.**, Prudential Plaza, Chicago 1, Ill.

For more details circle NED-567 G1 on enclosed inquiry slip

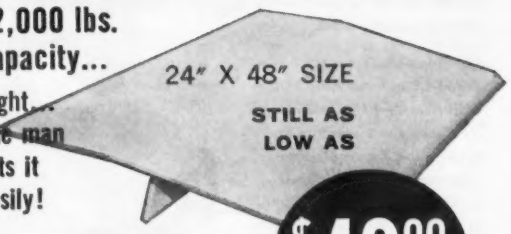
compare size
compare capacity
compare price

. . . of any dockboard with LANGSENKAMP'S ORIGINAL

Super Strength Aluminum DOCK PLATE

12,000 lbs. capacity...

Light... one man lifts it easily!



$49.00

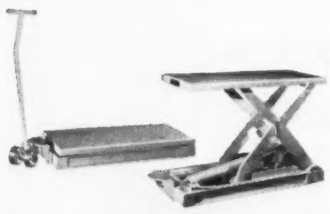
- 9 styles — over 65 stock sizes.
- Special alloys give extra strength and durability to meet today's increased freight handling requirements.
- Exclusive — optional, abrasive safety surface gives permanent non-skid protection even if wet!

Write today for complete catalog and prices.

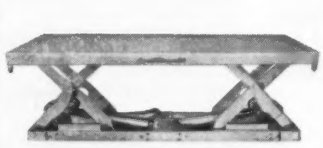
F. H. LANGSENKAMP CO.
227 E. SOUTH ST. • INDIANAPOLIS 4, INDIANA

For more details circle NED-568 G1 on enclosed inquiry slip

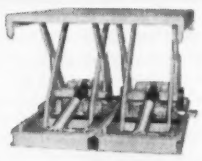
FROM SKID LEVEL UP UP UP TO WHATEVER WORKING HEIGHT YOU WANT THE EASY WAY



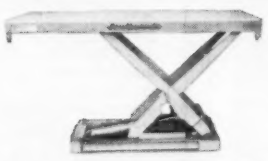
Series L — Average Loads
Portable models slide readily under standard skids. May be shifted from location to location as machine time and need warrant. No installation cost, simply plug in.
Capacities: 500–2,000–4,000–6,000 8,000–12,000 lbs.



Series LT — Long Loads
For fixed position at production equipment either on floor surface, or in shallow excavation with table top becoming an integral part of the floor. Longitudinal stability a feature.
Capacities: 1,000–4,000–8,000–12,000 16,000–24,000 lbs.



Series LD — Wide Loads
Designed to give exceptional lateral stability. Note that all models are completely self-contained, have no hampering superstructure, give free access to work load from all angles.
Capacities: 1,000–4,000–8,000–12,000 16,000–24,000 lbs.



Series LH — High Work Positions
A longer leg adaptation of Series L models, increasing the range of their extended heights to meet unusual requirements for lifting beyond normal work-positioning elevations.
Capacities: From 1,000–10,000 lbs. depending on rise.

In industry after industry, the Southworth Lift Table is cutting handling costs by providing an easy way of elevating skid or palletized loads to a correct working height for machine, process or assembly operations. The required lift may be in one stage from skid level to an established working level, as with dies, castings and fixtures, etc. Or it may entail frequent adjustment of stock height, as in sheet feeding, sorting and inspection. Either way, the lift desired is a mere matter of simple switch control.

Tables illustrated are basic models. Features common to all are a scissor-type mechanism that is rugged, compact and hydraulic powered; a hinged platform giving access to self-contained motor and pump assembly even in a totally collapsed position; low installation and maintenance costs; full and fool-proof automatic control. Southworth, nationally known as a manufacturer of precision equipment, also offers its engineering services to those wishing to adapt these Tables for specific applications.

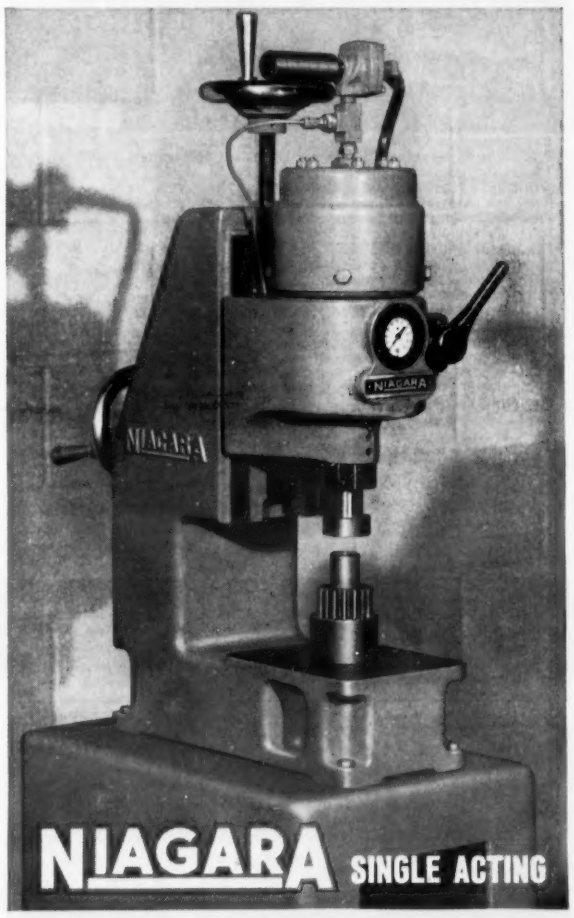
For Further Details Write:

SOUTHWORTH MACHINE CO. since 1890

SOUTHWORTH MACHINE CO.
617 WARREN AVENUE, PORTLAND, MAINE

For more details circle NED-564 G1 on enclosed inquiry slip

versatile! rugged! easy to operate!



AIR PRESSES

Here's a line of precision-built, single-acting air presses to meet your specific needs for punching, swaging, staking, upsetting, imprinting, or the seating and removal of close tolerance bushings and bearings.

Take your pick from four basic press sizes ranging from ½ ton at 85 psi to 4 tons at 170 psi. Choose the best control for your operation from a selection of 3 air and 3 electrical systems. For specialized applications, you may select various accessories including electronic timers, speed control valves, and pressure limit controls.

Rugged cast frames assure utmost accuracy on critical jobs. Diaphragm-type, frictionless air cylinder, requiring no lubrication, provides continuous, maintenance-free service. Interchangeable ram adapters accommodate a wide assortment of punches and dies. Press can be furnished for bench mounting or with a floor stand.

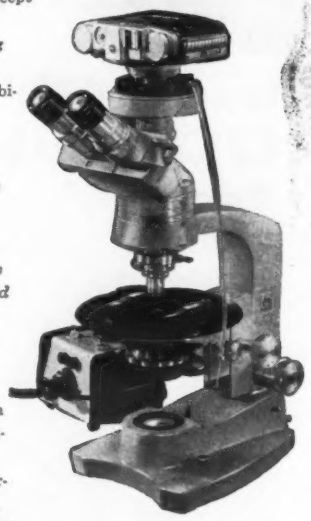
SEND FOR BULLETIN 85 for full information.

NIAGARA MACHINE & TOOL WORKS, BUFFALO 11, N. Y.

District Offices and Distributors in principal U. S. cities and major foreign countries.

For more details circle NED-569 G1 on enclosed inquiry slip

NEW Polarizing Microscope... the AO POLARSTAR



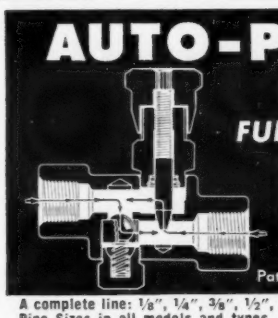
Presents a building-block concept of design that gives you an unequalled choice in selecting your polarizing microscope and equipment. Various combinations of bodies, stages, analyzers, nosepieces, substage equipment and bases can be selected to provide the exact model you want.

AO Polarstar features: Interchangeable, *reversible bodies* with *Bertrand Lens* • *Polaroid Analyzer*, fixed swing-in or rotatable • *Focusable Stage* with coarse and fine adjustments • *Polaroid Polarizer* in Abbe condenser • Swing-in *Auxiliary Condenser* • *Strain-Free Objectives, Wide Field Eyepieces* and all essential air-glass surfaces are coated. Complete information in Polarstar Brochure No. SB2300. Write for your copy today.

American Optical COMPANY
INSTRUMENT DIVISION, BUFFALO 15, NEW YORK

For more details circle NED-570 G1 on enclosed inquiry slip

AUTO-PONENT®
HYDRAULIC FULL FLOW VALVES



Flow Control, Needle, Check, for HYDRAULIC Power

Model KF Flow Control Valve with Dial and Knob adjustment for direct reading and duplicating reference. Now available in Aluminum for 3000 psi.

Pat. #2,841, 174

A complete line: 1/8", 1/4", 3/8", 1/2", and 3/4" female Dryseal Pipe Sizes in all models and types. Equivalent Aeronautical Tube Sizes on special order.

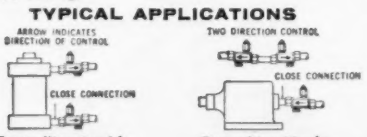
MINIMUM PRESSURE DROP AND POWER LOSS . . . Oversize ports and passages give maximum flow at minimum pressure drop, insure greater accuracy and response in hydraulic or large volume air cylinder control.

EASY FLOW ADJUSTMENTS under full pressure. Seal located at port to eliminate air or dirt traps. Gland structure equally effective on pressure or vacuum.

SENSITIVE, CHATTERLESS BALL CHECK . . . Patented design insures rapid ball movement to open or close at low differentials.

FORGED BODIES permit higher pressures with wide safety margins. Aluminum—3000 psi; Steel and Stainless Steel—5,000 psi. Pressure ratings based on better than 5 to 1 safety factor. All internal parts are Stainless. Write for illustrated catalog.

TYPICAL APPLICATIONS



Controlling Double Acting Cylinder — Controlling Single Acting Cylinder

AUTOMATION AUTO-PONENTS INC. COMPONENTS
2929 GRANT STREET
BELLWOOD (Chicago Suburb) ILLINOIS

For more details circle NED-571 G1 on enclosed inquiry slip

APCO TORQUE TOOLS TO MEET EVERY REQUIREMENT

Apco Mossberg manufactures over 75 standard styles of torque tools ranging from an inch gram to 2000 foot pounds. In addition, they build many special tools for specific applications.

Every Apco torque tool is manufactured to rigid specifications to assure you the best available. They meet government standards, and are built to withstand 50,000 flexes without adjustment.

The Apco Mossberg Catalog of Torque Tools describes all styles, giving full information as to capacity, sizes and price. Write for your copy now.

- Special Purpose Wrenches
- Original Equipment Wrenches
- Torque Tools

APCO MOSSBERG COMPANY
161 Lamb Street, Attleboro, Mass.

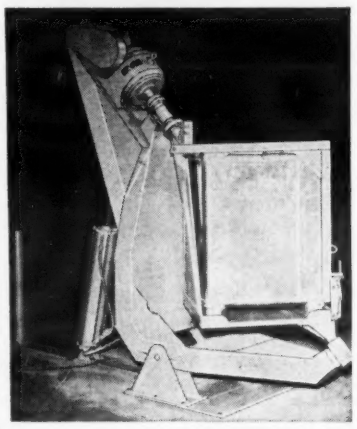
For more details circle NED-572 G1 on enclosed inquiry slip

INTERCOM TELEPHONE
used without lifting the receiver

Miniature transistorized amplification system of the HandsFree interoffice telephone has a volume control which permits conversations to be clearly transmitted and received from anywhere in an office. Pressing a button actuates the amplification system, and the telephone receiver then performs as a microphone, leaving the user's hands free. An adjacent loudspeaker unit is connected to the telephone to receive incoming conversation. If privacy is desired, lifting the handset cuts out the loudspeaker system. A priority button for cut-in privilege on a busy phone is available. • **Tele-Norm Corp.**, 57 W. 42nd St., New York, N. Y.

For more details circle NED-573 G1 on enclosed inquiry slip

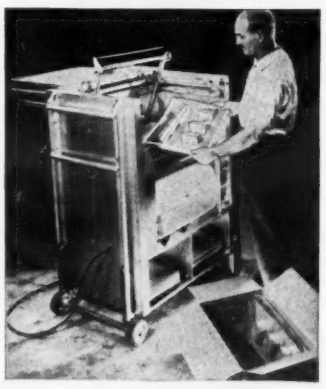
BIN BLENDING UNIT
tumbles Tote Bins diagonally



Contents of Tote Bin storage, shipping, and discharge containers are blended in about 5 min by rotating them by their diagonal corners on the Tote Tumbler. By placing the bin on an automatic scale, it can be fed with different materials from screw type Tote Tilts or conveying systems, then tumbled and taken to point of use. Specifications depend upon the material handled. • **Tote Systems, Inc.**, Beatrice, Nebr.

For more details circle NED-574 G1 on enclosed inquiry slip

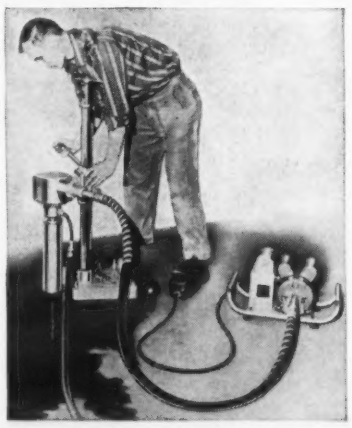
PLASTIC PACKAGING MACHINE
encases items weighing up to 35 lb



Form fitting, protective packages produced on the Poly-Tite plastic packaging machine can be turned out wherever needed in the plant. The 150-lb machine rolls to the job on its own wheels, and requires only 115 v. Numerous small items or single items weighing up to 35 lb are encased in clean transparent plastic film and fastened to a corrugated paperboard pad. • **Avery Industries, Inc.**, M f P Div., 333 N. Bayshore Blvd., San Mateo, Calif.

For more details circle NED-575 G1 on enclosed inquiry slip

PORTABLE CORE DRILL
has 2 to 6¼-in. hole capacity



Convertible, portable masonry drill unit consists of a Power-Pack, 2-hp continuous duty NEMA rated motor mounted on a portable tubular steel cradle, flexible shaft, and foot switch. To the DH-20 basic unit can be added a portable handpiece, connected to the flexible shaft, for drilling up to 2 in. diameter holes. Unit has a 2 to 6¼-in. diameter hole capacity when used with a drill stand. The flexible shaft is inserted into the gear box of the stand for making holes up to the maximum capacity. • **Clipper Mfg. Co.**, Suite 178, 2800 Warwick, Kansas City 8, Mo.

For more details circle NED-576 G1 on enclosed inquiry slip

Takes off grease, grime, ink, paints, stains in seconds!

Quick-acting Zep-O-Kreme gets hands clean fast. Mild detergent-emulsifier ingredient removes grime, grease or stain from hands easily, instantly. Lanolin content protects against chafing, cracking. Built-in agent (trichlorobamide) guards hands against infections and allergic reactions. Zep-O-Kreme available in several convenient packages, each with engineered dispensing equipment. Shop men like Zep-O-Kreme.

Free try ZEP-O-KREME in your shop with generous trial sample! Write today

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1310 SEABOARD INDUSTRIAL BLVD., N.W., ATLANTA, GA.
BIRMINGHAM • CLEVELAND
DALLAS • KANSAS CITY • NEWARK

For more details circle NED-577 G1 on enclosed inquiry slip

PUMPS most anything* THAT POURS!

*A few exceptions. Write for approved list.

Take the risk and waste out of liquid transfer! This rugged Tokheim Hand Pump, with alternate diaphragms, handles most anything from diesel oil to acetates—safely, quickly, without spillage. Eliminates fire hazards and accidents, aids good housekeeping. Accelerates production, too. Pumps 20 gallons per 100 strokes. Get list above from your Tokheim dealer, or write direct today.

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1656 Wabash Avenue Fort Wayne 1, Indiana

Subsidiaries: GenPro Inc., Shelbyville, Indiana; Tokheim of Canada, Ltd., Toronto, Ontario; Tokheim International, A. G., Lucerne, Switzerland

For more details circle NED-578 G1 on enclosed inquiry slip

Transistorized Photoelectric Controls

small remote sensing and light source heads—two of the many items described in the complete catalog.

Built to heavy duty industrial standards. Conservative design provides wide margin of reliable operation, beyond normal variations in line voltage.

Available with self-contained or remote sensing heads and with a wide selection of light sources to meet widely varying application needs.

Complete catalog describes extensive line of transistorized and conventional photoelectric equipment—also includes diagrams of widely varied applications.

Send for catalog or tell us what you want to do.

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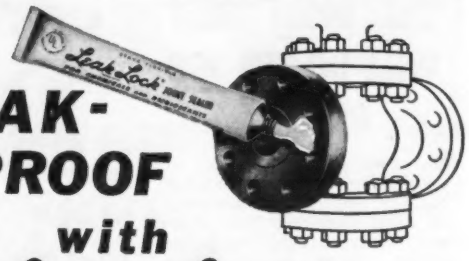
Box 722D Danville, Ill.
Hickory 6-0650 TWX: DANV ILL 7338
Representatives in principal Cities

For more details circle NED-579 G1 on enclosed inquiry slip



LEAK-PROOF with Leak Lock®

SPECIFIED IN HUNDREDS OF APPLICATIONS... WORKS WHERE OTHER COMPOUNDS FAIL!

Don't take chances—seal all joints, flanged or threaded with Leak Lock—won't contaminate—contains no lead—withstands solvent action—*excellent adhesion.*

Leak Lock won't freeze joints or heat spontaneously—remains unaffected by shock or vibration. Keeps mating surfaces corrosion free.

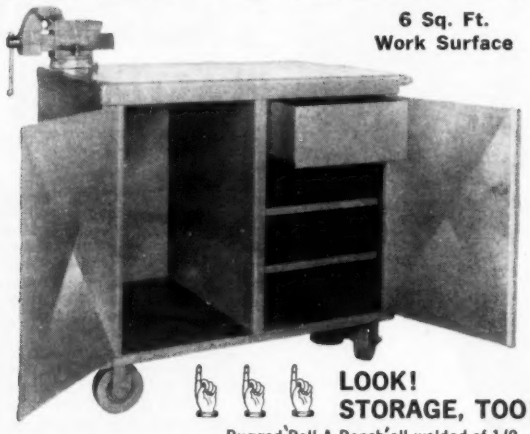
Sold in 4-oz. applicator cans, 1⅓ oz. squeeze tubes—pint and 10-lb. containers. Write today for: ***FREE SAMPLE TUBE***

Listed by Underwriters' Laboratories for gas, oil, propane and butane equipment.

HIGHSIDE CHEMICALS INCORPORATED
14 Colfax Avenue • Clifton, N. J.

For more details circle NED-580 G1 on enclosed inquiry slip

SAVES STEPS
TIME & TOOLS
MOBILE BENCH



6 Sq. Ft. Work Surface

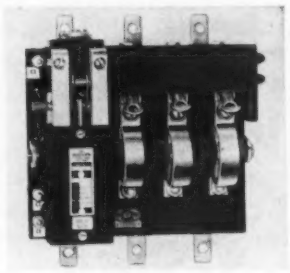
LOOK! STORAGE, TOO!

Rugged 'Roll-A-Bench' all-welded of 1/8 and 3/16 in. plate. Supports 2000 lbs. Easily moved by one man. Doors lock to protect tools!
Shipping Weight: 335 lbs. **$185.00** fob Cleveland

the Overbeke-Kain company
20979 AURORA RD. / BEDFORD, OHIO

For more details circle NED-581 G1 on enclosed inquiry slip

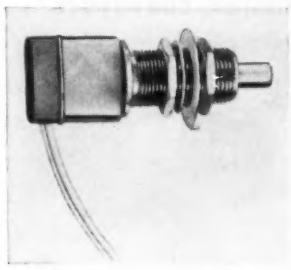
ELECTRICAL CONTACTORS
mechanically held, operate quietly



Mechanically held in either open or closed positions, the MPH Series of electrical contactors is quiet in operation and unaffected by line fluctuations. Units feature low inrush currents and moisture resistant molded epoxy coils. Extended bus bars simplify installation in panels and switchboards. All parts are accessible for maintenance. Contactors are available in 30, 75, and 100-amp sizes and are rated up to 600-v ac non-inductive load or 227-v maximum lighting load. • **Zenith Electric Co.**, Dept. ND-5, 152 W. Walton St., Chicago 10, Ill.

For more details circle NED-583 G1 on enclosed inquiry slip

LIMIT SWITCH
hermetically sealed, plunger type

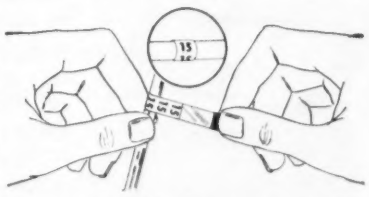


Single-pole double-throw Series 61574 limit switch can be used where subject to ice, water, and mud. It is made of corrosion resistant materials, has three 72-in. potted leads, and incorporates a hermetically sealed plunger. Operating force is 6.7 lb, ±2.2 lb, and release force is 3.5 lb minimum. Pretravel is 3/16 in. maximum, over-travel is 0.250 in. minimum, and weight is 0.125 lb. It is rated at 5 amp resistive and 3 amp inductive at 28 v dc and 115 v ac. Switch is installed by tightening two hex nuts. • **Haydon Switch, Inc.**, 536 S. Leonard St., Waterbury 20, Conn.

For more details circle NED-584 G1 on enclosed inquiry slip

CODED WIRE MARKER
clear portion protects coded area

Each self-adhering E-Z-Code wire marker is partly pre-coded and partly transparent. The clear portion wraps around the applied coded part, protecting the marking from oils, greases, chemicals, fluids, and other foreign matter. Dirty marks can be wiped clean, and printing will not fade or wear off.



Self-laminating markers are suitable for motor repairs, machine tool wire identification, transformer leads, outdoor equipment, switches and signals, and engines. • **Western Lithograph Co.**, Westline Products Div., 688 E. Second St., Los Angeles 54, Calif.

For more details circle NED-585 G1 on enclosed inquiry slip

growing choice for O.E.M. uses
CINCINNATI "PB" BLOWERS

PB Pressure Blower

For exhausting, conveying, air supply, cooling, dust and mist collection . . . these compact low-cost blowers give higher efficiency than blowers costing twice as much. Dependable service and prompt delivery are other reasons **Cincinnati** Pressure Blowers are installed on more and more equipment.

Name-brand flange-type motor is attached direct to cast aluminum housing (can be used with or without pedestal)—a big space and labor saver! Superior **Cincinnati** design includes spark-proof aluminum housing and (self cleaning) wheels for lighter weight, three-position installation, including flush mounting for compactness.

LM Volume Blower

Large stock, prompt shipment saves you inventory! Honestly rated from 350 to 1420 cfm., up to 8" s.p. with ⅓, ½, 1 and 2 h.p. motors. Also custom designs for specific needs.

Some good territories available for representatives.

Write for complete blower information

CINCINNATI FAN and VENTILATOR CO.
3554 Montgomery Rd. Cincinnati 7, Ohio

For more details circle NED-587 G1 on enclosed inquiry slip

SOUTHWEST
"Monoball"®
SELF-ALIGNING BEARINGS

CHARACTERISTICS

	ANALYSIS	RECOMMENDED USE
1	Stainless Steel Ball and Race	For types operating under high temperature (800-1200 degrees F.).
2	Chrome Alloy Steel Ball and Race	For types operating under high radial ultimate loads (3000-893,000 lbs.).
3	Bronze Race and Chrome Steel Ball	For types operating under normal loads with minimum friction requirements.
4	"Dyflon"® Plastic Alloy Inserts. CRES Ball and Race. Chrome Alloy Steels.	For types operating under rotational, high radial loads and long cycle life where lubrication is impossible.

Thousands in use. Backed by years of service life. Wide variety of Plain Types in bore sizes 3/16" to 6" Dia. Our engineers welcome an opportunity of studying individual requirements and prescribing a type or types which will serve under your demanding conditions. Southwest can design special types to fit individual specifications. Write for Engineering Manual No. 551. Address Dept. NED-61

SOUTHWEST PRODUCTS CO.
1705 SO. MOUNTAIN AVE., MONROVIA, CALIFORNIA

For more details circle NED-588 G1 on enclosed inquiry slip

Announcing 2 New RIDGID® Conduit Benders

Extra-Deep Sockets Minimize Handle Breakage!

3 Thin-Wall Conduit Benders
½" to 1" Thin-Wall;
½" to ¾" Heavy-Wall Conduit

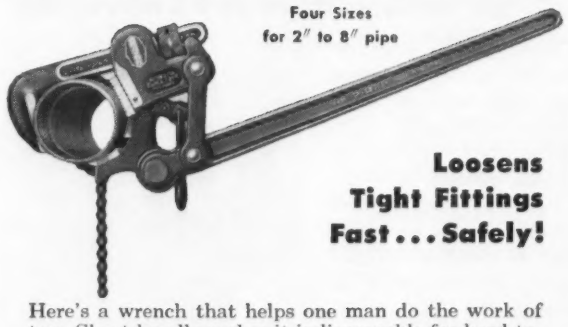
2 Hickey-Type, Heavy-Wall Conduit Benders
½" to 1¼" Heavy-Wall Conduit

Cast of high-strength malleable, these new RIDGID Conduit Benders have an exceptionally smooth, typically RIDGID quality finish you'll like on sight. Look in the extra deep sockets, and you'll see the threads down at the bottom. Elimination of strain on handle threads reduces breakage.

Call your Supply House!
THE RIDGE TOOL COMPANY
ELYRIA, OHIO, U.S.A.

For more details circle NED-582 G1 on enclosed inquiry slip

RIDGID® Compound Leverage Wrench



Four Sizes for 2" to 8" pipe

Loosens Tight Fittings Fast . . . Safely!

Here's a wrench that helps one man do the work of two. Short handle makes it indispensable for hard-to-get-at frozen joints. Pressure on handle is doubled as hook jaw turns pipe in one direction, while offset chain vise trunnion exerts an equal pressure in the opposite direction. Correct placement of trunnion lets you tighten or loosen right or left hand threaded joints . . . with pipe on either side of fitting. Replaceable jaws are extra strong alloy tool steel.

Call your Supply House!
THE RIDGE TOOL COMPANY
ELYRIA, OHIO, U.S.A.

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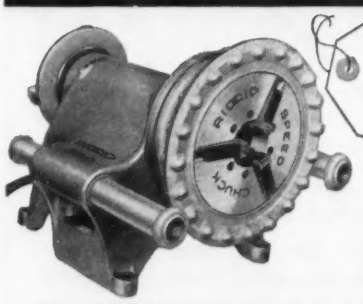
GET YOUR PIPE AND CONDUIT JOBS DONE FASTER AND BETTER WITH A
RIDGID® 300 POWER DRIVE



Easy to carry ...weighs only 79½ lbs.!

Fast . . . even on 2" pipe or conduit

This new 300 gives you most for your money. Its RIDGID-built motor has extra power . . . heavy-duty bump-proof switch . . . RIDGID Speed Chuck with guaranteed tight grip, forward, reverse, replaceable jaw inserts and all-metal hand wheel . . . 2 extra-strong tool support bars . . . and a lot of other features that make it far the most for your money. You can't afford to be without it.

Call your Supply House!
THE RIDGE TOOL COMPANY
ELYRIA, OHIO, U.S.A.

For more details circle NED-589 G1 on enclosed inquiry slip

USE THE

Nissen

BALL POINT WRITING TUBE

make permanent marks on

metal
wood
plastic
glass

This ball point marker saves considerable time in marking, numbering or coding products made of wood, metal, plastic and glass. It is widely used because: • tube with ball point makes application easy on rough or smooth surfaces • special, fast drying opaque ink withstands heat and weathering • marks will not chip, peel, fade or rub off • 7 different colors are available • 3 different size ball points make fine or broad lines

Write, wire or call for a trial order

JOHN P. NISSEN, JR. Co., *manufacturers*
GLENSIDE, PENNSYLVANIA • CALL TUrner 4-4664

For more details circle NED-590 G1 on enclosed inquiry slip

Light Up

dark work areas and confined spaces

DAY-RAY

PORTABLE FLUORESCENT LIGHTS

Safe: vapor and moisture tight. Always cool. Can't burn mechanic's hands. Approved by safety engineers.

Easy to use: light weight. Small diameter. Easy to grip or hang.

Economical: long life. Withstands vibration. Easily relamped.

In 6, 8, 13, 15 and 30 watt sizes. 18" handles available.

Write for prices and literature

DAY-RAY PRODUCTS, INC.
South Pasadena, Calif.

Originator of aircraft fluorescent ballast systems

For more details circle NED-591 G1 on enclosed inquiry slip

Eastern

PORTABLE MIXERS

especially designed for small batch processes

. . . offer precise mixing results with long-term cost savings

Eastern Portable Mixers give dependable, low-cost service in small batch processes. Where fixed mounted installations are not required, Eastern's Portables offer greater versatility, ease of handling, and long-term savings.

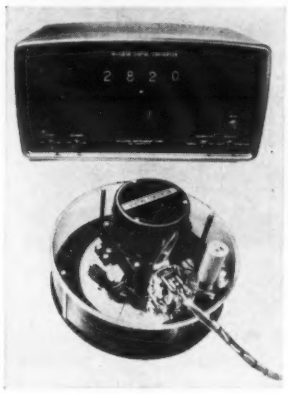
Speeds of 420, 1125, and 1725 R.P.M. rated from 1/20 to 3 H.P. are standard. Motors in all standard types can be supplied in open drip-proof, totally-enclosed, or explosion-proof construction.

Write for new Portable Mixer Bulletin 530-N.

EASTERN INDUSTRIES, INC.
MIXER DIVISION • NORWALK, CONN.

For more details circle NED-592 G1 on enclosed inquiry slip

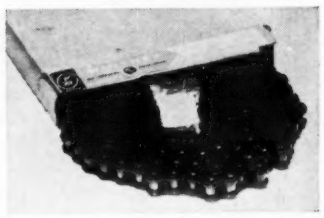
AUTOMATIC METER READER
checks any pointer type instrument



Any pointer type instrument such as a speedometer, tachometer, pressure gage, or thermometer is read automatically by this Robot Meter Reader, with the reading displayed as lighted numerals or printed on a recording tape by a digital printer. It consists of a scanner which mounts on the pointer instrument and the electronic unit which houses the electronic circuitry and the digital display unit. This device is highly accurate. • **MacLeod Instrument Corp.**, 4250 N. W. Tenth Ave., Ft. Lauderdale, Fla.

For more details circle NED-593 G1 on enclosed inquiry slip

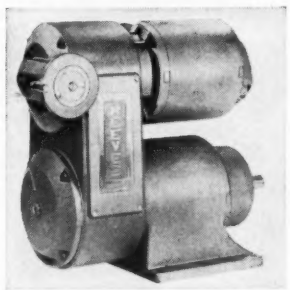
SELF-LUBRICATING CHAIN
for power transmission, conveyors



Single, double, triple, and quadruple strands are available in 1-in. pitch American Standard No. 80 MSL power transmission and conveyor chain. Average ultimate strengths range from 13,000 lb in single strand type to 52,000 lb in quadruple strand type. Lubricant contained within the oil-impregnated sintered steel bushing expands to flow over all vital bearing surfaces, making it self-lubricating in operation. When the drive stops, the lubricant contracts and is re-absorbed by the bushing. This cycle continues through the chain's service life, and no additional oil is required. • **Whitney Chain Co.**, Dept. MJ, 4545 S. Western Blvd., Chicago Ill.

For more details circle NED-594 G1 on enclosed inquiry slip

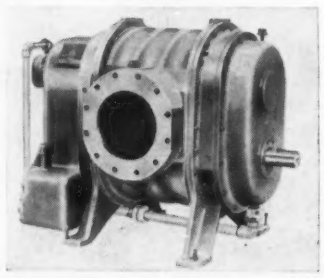
VARIABLE SPEED DRIVE
provides 25 to 2630-rpm outputs



Ratings from 25 through 40 hp are offered in this Motodrive motorized variable speed drive with single, double, or triple stage gearing for ratios up to 4:1 and outputs from 25 to 2630 rpm. The Size 600 unit is available in vertical, horizontal, and 45-degree assemblies with wall or ceiling mountings. Trunnion mounted vertical, horizontal, and 45-degree assemblies are standard in no-reducer and single-reducer models. Either C or Z-flow output shaft arrangement is standard. J.I.C. scoop and NEMA D-output flange mountings are also available. Units are offered with magnetic brakes rated to 230 lb-ft capacity. • **Reliance Electric & Engineering Co.**, 24701 Euclid Ave., Cleveland 17, Ohio.

For more details circle NED-595 G1 on enclosed inquiry slip

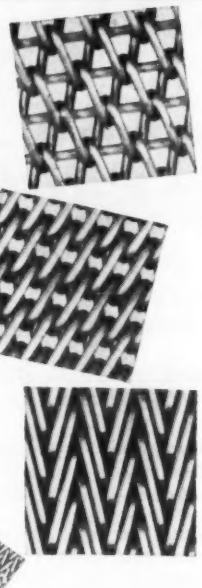
HIGH-VACUUM BOOSTER PUMPS
for vacuums down to 0.5 micron Hg



Two-impeller, dry-type booster pumps designed for high-vacuum service safely handle high differential pressures which develop through peaks in pump-downs or gas bursts in vacuum processing. Volumetric efficiency is about 90 per cent. Booster can be connected directly to chamber to be evacuated without complicated couplings, and valves or by-passes are not needed. Units are easily incorporated into a simple or cascaded vacuum system with a mechanical forepump, and can be directly connected to, or V-belt driven from, an externally mounted electric motor. Boosters are offered in 45 sizes for pressures from atmospheric to 0.5 micron Hg absolute with pumping speeds to 35,000 cfm. • **Dresser Industries, Inc.**, Roots-Connersville Blower Div., 900 W. Mount St., Connersville, Ind.

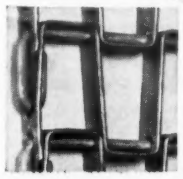
For more details circle NED-596 G1 on enclosed inquiry slip

THE "RIGHT" BELT WILL DO THE JOB BETTER!



No two product flow or processing problems are alike. No one belt design can meet all JOB requirements. Ashworth's manufacturing range covers many designs and many constructions in each design family.

Ashworth representatives are trained to develop the field data necessary to enable Ashworth engineers to recommend the "Right" belt for the JOB. Whatever your material flow problem during processing . . . consult an Ashworth representative.



Literature available, write to:

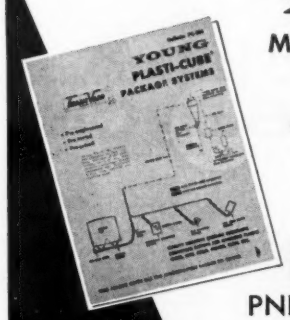
ASHWORTH BROS., INC.,
WINCHESTER, VIRGINIA
Sales Offices in Principal Cities

For more details circle NED-597 G1 on enclosed inquiry slip

THE

YOUNG

MACHINERY COMPANY
announces



- Pre-engineered
- Pre-tested
- Pre-priced

PLASTI-CUBE®
PNEUMATIC SYSTEMS

Get your copy of Bulletin PC/101 Today!

Take full advantage of bulk savings by designing and installing your own pneumatic conveying system for the handling of plastic cubes, dice, prills, pellets or chips.

Young Plasti-Cube systems are pre-engineered, pre-tested and pre-priced. In a matter of minutes you can select the system you need and know the cost.

Bulletin PC/101 gives you all the information you need to make an intelligent decision and place your order.

Get your free copy today.

THE YOUNG
Machinery Company, Inc.
Muncy, Pennsylvania
LIncoln 6-3165

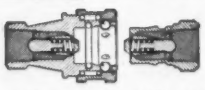
Y/108

For more details circle NED-598 G1 on enclosed inquiry slip

HANSEN

SERIES HK® QUICK-CONNECTIVE
TWO-WAY SHUT-OFF COUPLING

QUICK FLUID LINE CONNECTION OR DISCONNECTION
WITH
INSTANT AUTOMATIC FLOW OR SHUT-OFF



Instantly shuts off both sides of line...prevents loss of liquid, gas or pressure

During instant of disconnection, "O" Ring in Socket provides tight seal—eliminates nuisance of leakage or spillage. In reverse, when Coupling is connected, "O" Ring seals Coupling *before* valves in Socket and Plug release flow from both sides of line.

Furnished in brass or steel with female pipe thread connections from 1/8" to 1 1/2" inclusive—also up to 1" in stainless steel.

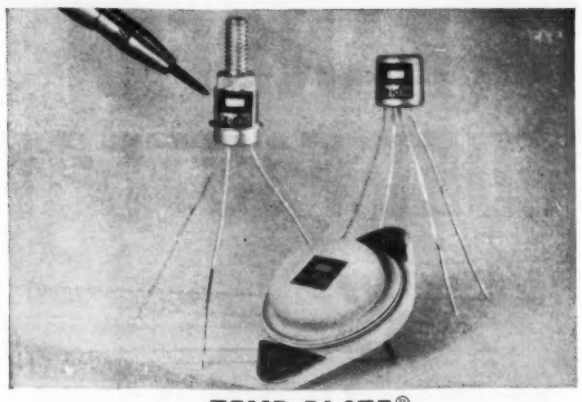
Write for the Hansen Catalog

a ready reference when you want information on couplings in a hurry. Lists complete range of sizes and types of Hansen Two-Way Shut-Off, One-Way Shut-Off, and Straight Through Couplings.

Representatives in Principal Cities
. . . See Yellow Pages

THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 35, OHIO

For more details circle NED-599 G1 on enclosed inquiry slip



TEMP-PLATE®
DETECTS ELECTRONIC OVERHEATING

Overheating of transistors, diodes, resistors and transformers is detected by Temp-Plate in a positive, direct manner. Simple, easy to use, irreversible, Temp-Plate is the little plastic tab that sticks to the component, turns black when the temperature reaches any desired value between 100° and 1100°F. Impervious to ambient atmosphere and production line handling, Temp-Plate is accurate to ±1%, provides for absolute indication of heat damage. Write now for descriptive literature.

TEMP-PLATE / Pyrodyne, Inc.
11973 San Vicente Blvd.
Los Angeles 49, California

For more details circle NED-600 G1 on enclosed inquiry slip

DUNCO TYPE MRR

Smallest Reed Relays!

1, 2, 4 and 12-pole encapsulated types

12 poles in a sturdy unit only 2-1/8" long (including leads) x 19/32" deep x 1-25/32" wide! . .
1, 2 and 4-pole types similarly miniaturized . . .
designed for reliable light load switching . . .
In-line terminals for 0.1" grid center mounting . . .
Write for Bulletin MRR-1 to:
Struthers-Dunn, Inc., Pitman, New Jersey

World's Largest Assortment of Relay Types
STRUTHERS-DUNN

Sales Engineering offices in: Atlanta • Boston • Buffalo • Charlotte • Chicago Cincinnati • Cleveland • Dallas • Dayton • Denver • Detroit • High Point Kansas City • Los Angeles • Montreal • New York • Orlando • Pittsburgh St. Louis • San Carlos • Seattle • Toronto • Export: Langguth-Olson Co., New York

For more details circle NED-601 G1 on enclosed inquiry slip

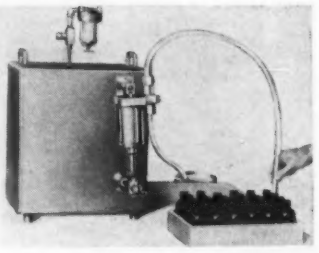
These are outside tracer lines—toughest assignment a steam trap can get—but Sarco's Thermo-Dynamic Steam Trap, Type TD-50, takes it in stride. It operates perfectly without adjustment through its full pressure range of 10-600 psi. Condensate and air are always removed as fast as they collect. The TD-50 is self-draining and freeze-proof when installed vertically, with a free discharge.

Once installed, forget it. Count on very long service life with maintenance practically nil. For TD-50 details ask for Bulletin 257. 6900

SARCO
SARCO COMPANY, INC.
635 MADISON AVE., NEW YORK 22, N. Y.
PLANT: BETHLEHEM, PA

For more details circle NED-602 G1 on enclosed inquiry slip

PORTABLE LIQUID FILLER
handles inflammable liquids



Inflammable liquids are safely handled by The Filamatic Model DAA-5 dual nozzle, air powered, portable liquid filler. Machine has a volume range from a few drops to 8 oz per stroke per nozzle. A dual 16-oz model can be ordered. Production rate is adjustable from 5 to 40 fills per minute. Unit is powered by a geared head, rotary air motor coupled to two reciprocating piston pumps. Volume dispensed by each pump is micrometer adjusted in stages of 0.001 in. Unit will handle free-flowing, semiviscous, or viscous liquids and has liquid-contacting parts of stainless steel and Teflon. Interchangeable glass and plastic pump assemblies are available for use with metal-sensitive liquids. • **National Instrument Co.**, 2701 Rockwood Ave., Baltimore 15, Md.

For more details circle NED-603 G1 on enclosed inquiry slip

DYNAMOMETER HOOKS
ball bearing swivel type

Loads through 25 tons can be supported on these ball bearing swivel hooks which extend the usefulness of Dillion Traction dynamometers, particularly in weighing operations. A particular example is where cranes or hoists are required to "snake" loads into position before making a vertical lift. Ball bearings permit a 360-degree free turn under full load, and "knee action" permits a 180-degree hinge movement. Three heat treated, drop forged models have 500 to 10,000, 15,000 to 20,000, and 30,000 to 50,000-lb ratings. Surfaces are plated for corrosion resistance. Dynamometers are made in 13 capacities from 0-500 to 0-100,000 lb. • **W. C. Dillon & Co.**, 14620 Keswick St., Van Nuys, Calif.

For more details circle NED-604 G1 on enclosed inquiry slip

TIME SWITCHES
in flush mounting steel cases

Suited for switchboard, wall, or panel mounting, these precision time switches provide a wide variety of time control functions for industrial applications. Both straight synchronous and synchronous-carryover models are available in flush mounting 16-gage steel cases. Doors on the cases may be adapted for either right or left-hand opening. A lock is installed by removing a knockout on the door. • **Sangamo Electric Co.**, 1301 N. 11th St., Springfield, Ill.

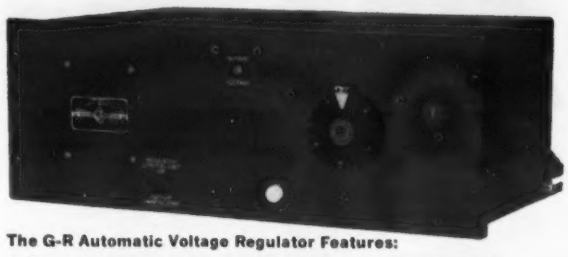
For more details circle NED-605 G1 on enclosed inquiry slip

POLYURETHANE PRESS-ON WHEEL
grip and traction improved

Additional lugs in this polyurethane press-on wheel increase grip and traction for efficient use on slippery surfaces. Intended for material handling trucks, the Disowheel is suited for use on docks, ramps, and inclines. It is resilient and resists wear, abrasion, and chunking out, as well as oil and chemicals. Cushion and solid types in standard press-on sizes fit any make electric or gasoline-powered handling truck. • **Pellon Corp.**, Disogrin Industries Div., 510 S. Fulton Ave., Mt. Vernon, N. Y.

For more details circle NED-606 G1 on enclosed inquiry slip

Up To 6 KVA!
Hold 10% Line Voltage Variations to 0.25%



The G-R Automatic Voltage Regulator Features:

- Power capability to 50 amperes; short-duration overloads to 500 amperes
- Zero waveform distortion
- No power-factor restrictions
- Output voltage range adjustable over ±10% from 115-volt input
- High response speed of 10 volts per second
- Available in 115- and 230-volt models, 50- and 60-c line frequencies, militarized units, and table-top or relay-rack mountings.

Type 1570-ALR Relay Rack Model, 115-volt, 60-cycle: $530.00

Write for AUTOMATIC VOLTAGE REGULATOR BULLETIN

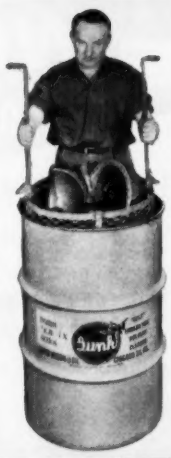
GENERAL RADIO COMPANY
WEST CONCORD, MASSACHUSETTS

Broad Avenue at Linden, Ridgefield, N. J. NEW YORK AREA 1000 N. Seward St. LOS ANGELES 38 8055 13th St., Silver Spring, Md. WASHINGTON, D. C. 1150 York Road, Abington, Pa. PHILADELPHIA 1186 Los Altos Ave., Los Altos, Calif. SAN FRANCISCO 6605 W. North Ave., Oak Park, Ill. CHICAGO In CANADA: 99 Floral Parkway, TORONTO 15

For more details circle NED-607 G1 on enclosed inquiry slip

GUNK® Hydro-Seal
economically strips paint from production rejects!

. . . eliminates hazard and expense of stripping paint with hot, caustic solutions — Gunk H.S. is *safe on all* metals. Just dunk; rinse with water. Available in open-head drums, with or without baskets; ideal for low-cost *cold immersion* process paint stripping . . . Removes grease and carbon too! Write for full details, *today*.



® Reg. trade mark

GUNK LABORATORIES, INC.
Gunk Chicago Co., River Forest, Illinois serving the Midwest and Southwest
Radiator Specialty Co., Charlotte, No. Carolina serving the East, Southeast and far West

For more details circle NED-608 G1 on enclosed inquiry slip

NOW..YOU CAN SHINGLE A FACTORY ROOF

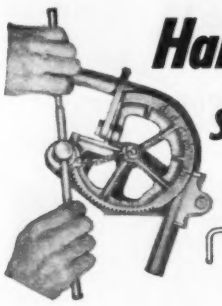
WITH CLASS "A" FIRE SAFETY-RATED PHILIP Carey FIRE-CHEX SHINGLES

For roofs down to 2" slope . . . exclusive 25 year guaranty bond . . . available through your roofing contractor or your building supply dealer. Mail coupon for important fact folder.

The Philip Carey Mfg. Co. Dept. NE-761 Cincinnati 15, Ohio

Send me your fact folder, "Now You Can Shingle a Factory Roof."
Name.....
Position.....
Company.....
Address.....
City.....Zone.....State.....

For more details circle NED-609 G1 on enclosed inquiry slip



Handy Tube Bender

Smoothly Bends ANY Pipe or Tubing

3/8" to 1 1/8" O. D.

Just a twist of the wrist assures perfect, even bends . . . right-angle, any angle, U and offset—every time. Eliminate need for els. No more guesses—no kinks! Save enough time, labor and money on ONE job to pay for your Handy Tube Bender.

See your supply house—or write for free folder today.

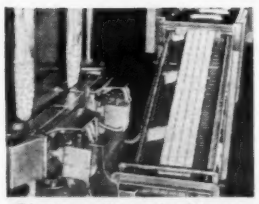
HOLSCLAW BROS., INC.
480 N. Willow Rd. • Evansville, Ind.

▲ For more details circle **NED-610 G1** on enclosed inquiry slip ▲

Overhead Wendway system saves valuable floor space. Excellent for cooling or drying operations.

WENDWAY
Pays for itself!

....IN ACTUAL PROVABLE SAVINGS



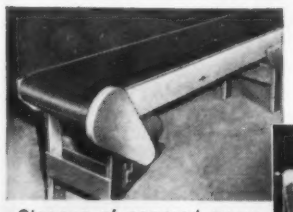
Short sections, inclines or curves solve processing problems—eliminate storage equipment and handling.

You'll be astounded to learn how quickly a Wendway conveyor system will pay for itself in your plant. Simply because Wendway eliminates multiple handling, saves man hours, floor space and storage equipment—all while conveying your particular product swiftly, silently, safely and *more economically* to a desired location.

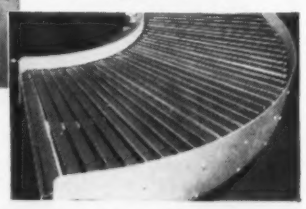
Wendway steel wire belting has proved most practical for any light product, package, carton, etc., up to twenty pounds per unit. It does not sag, stretch or accumulate dirt. And . . . it's available in a wide choice of practical widths in standardized straight, curved, and tiered component sections.

Assembly operations are "naturals" for Wendway. Products travel safely from point to point with no delays.

For Those Difficult, Hard-To-Convey Products . . . we recommend any one, or a combination of the heavy duty Wendway Conveyor types shown below.



Heavy duty Wendway is available with solid belting such as Neoprene, rubber or canvas. Belting widths mix or match with **regular** or slat type units.



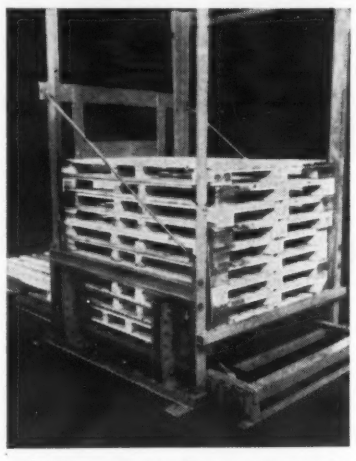
Closeup of powered curve shows how individual slats negotiate curve without variation in spacing. Capacity is approximately 70 pounds per lineal foot. Available in curved or straight sections in standard widths.

Write Today—for additional information, specifications on a Wendway system to match your requirements.

UNION STEEL PRODUCTS CO.
505 N. Berrien St.
ALBION
MICHIGAN

▲ For more details circle **NED-611 G1** on enclosed inquiry slip ▲

PALLET DISPENSING MACHINE
can be semi or fully automatic



Single empty pallets are dispensed from a preloaded magazine by manual demand or indexed automation by this pallet dispensing machine. With only slight modification, machine can be converted to an empty pallet stacker, receiving, elevating, and stacking the pallets to within headroom limitations. It has end or side entrance for trucks removing the pallets. Machine is easily adapted to existing conveying system, or is offered as a unitized system. • **H. L. Bushman Co.**, 100 W. Central Ave., Roselle, Ill.

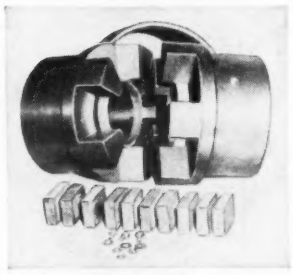
▲ For more details circle **NED-612 G1** on enclosed inquiry slip ▲

VERTICAL DRAWING FILE
caster mounted, holds 1200 sheets

Twelve Type S binders with up to 1200 sheets are accommodated by the Mobile Plan Rack, a tubular steel framed vertical drawing file mounted on ball bearing casters. It can be adjusted for sheets up to 26 x 48 in. Unit weighs less than 18 lb and occupies only 3 sq ft of floor space. It is priced at $19.95. • **Plan Hold Corp.**, 5204 Chakemco St., South Gate, Calif.

▲ For more details circle **NED-613 G1** on enclosed inquiry slip ▲

FLEXIBLE COUPLINGS
in 2.6 to 1365-hp range



With semisteel cast bodies and hot-dip galvanized outside collar and inside sleeves, these flexible couplings will operate in water, oil, and mild chemicals. Set screws, lockwashers, and retaining bolts are stainless steel, and Bakelite cushions are treated against distortion. Units are offered in 2.6 to 1365-hp range at 100 rpm and bore sizes from solid to 9½ in. In photo of the disassembled coupling, bodies, collar, and sleeves are in background; cushions and stainless hardware are in foreground. • **Lovejoy Flexible Coupling Co.**, 4891 W. Lake St., Chicago 44, Ill.

▲ For more details circle **NED-614 G1** on enclosed inquiry slip ▲

VACUUM CLEANER
with side-tilting pickup head

Pickup head of this dry-type Flor-O-Vac vacuum cleaner mounts directly on the front of the machine and has a swivel-bellows neck which allows side-to-side tilt of up to 3 in., plus ¾-in. up and down movement. Head thus contacts floor at all times, regardless of unevenness. The 53-lb portable machine has one pickup head for hard floors, one for carpeted floors, and dual disposable cellulose fiber dust cartridges, each of which has its own 115-v ac/dc, 1700-rpm motor. Eight-inch wheels at rear and caster at front facilitate movement. Direct-mounted tools are 24 in. wide, whereas tools for use with wand assembly are 16 in. wide. • **Nobles Engineering & Mfg. Co.**, 645 E. Seventh St., St. Paul 6, Minn.

▲ For more details circle **NED-615 G1** on enclosed inquiry slip ▲

TRANSFER FUEL FASTER!

PATENT 2,843,051

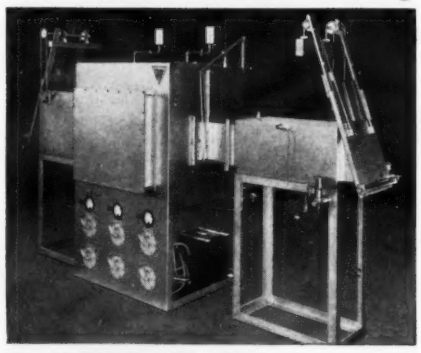
- Pumps on forward and back strokes
- Delivers up to 20 gpm with up to 20-foot lift
- Vacuum breaker prevents siphonage
- No foot valve
- Models for farms, garages, factories, construction jobs
- Available with automatic nozzle

JOHN WOOD COMPANY
BENNETT PUMP DIVISION • MUSKEGON, MICHIGAN
IN CANADA: JOHN WOOD COMPANY LIMITED
Toronto • Montreal • Winnipeg • Vancouver

QUALITY PRODUCTS JOHN WOOD SINCE 1861

▲ For more details circle **NED-616 G1** on enclosed inquiry slip ▲

For Critical Heat Treating Processes



muffle type

hydrogen-reduction

three zone

PERECO
STRAIGHT-LINE FURNACE

This 3-zone, straight-line Pereco Hydrogen-Reduction Furnace is especially designed to perform critical heat treating processes, such as reducing tungsten oxide powder to pure tungsten metal. It has counter-balanced sliding plate doors and solenoid-operated flame curtains at each opening. Interior blast-gates, manually operated from the outside, separate the hot zone from both the entrance and exit areas. Other features, as well as possible design modifications, make this type of unit well worth investigating if you have critical heat treating work to do. Write us.

Standard or special furnaces and kilns for temperatures from 450° F to 5000° F.

PERENY EQUIPMENT CO., Inc.
Dept. G, 893 Chambers Rd., Columbus 12, O.

PERENY EQUIPMENT COLUMBUS OHIO

▲ For more details circle **NED-617 G1** on enclosed inquiry slip ▲

Here's protection by the roll for above-ground and buried pipe. Arno Pipe-Wrap is made of stretchy, inert polyethylene with a pressure-sensitive adhesive. Provides a tough, continuous barrier to protect pipes against rust, acid and alkalis. Reduces replacements . . . fast, easy to apply. Send for FREE test sample.

Manufacturers Agents Wanted For Some Selected Areas

Arno® ADHESIVE TAPES, INC.
Dr. Scholl's Adhesive Tape Division
5221 Ohio Street, Michigan City, Indiana

▲ For more details circle **NED-618 G1** on enclosed inquiry slip ▲

NEW & EXCLUSIVE with McCord Model 55 Lubricator

SAFE-LEVEL SIGHT FEED

That's right! The finest lubricator on the market today has been refined to give you even *more* for your money. Now, the McCord Model 55 Lubricator comes equipped with new, exclusive Safe-Level Sight Feed with these outstanding benefits for you...safe, sure warning of malfunction... quicker priming . . . better feed regulation . . . extreme accuracy . . . improved reliability. *IMPORTANT:* Safe-Level Sight Feed can also be added to existing Model 55's.

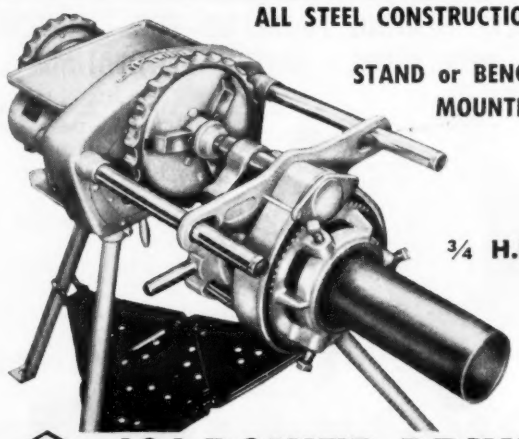
For COMPLETE details on this important new development write today to:

McCORD CORPORATION
Lubricator Division • Detroit 11, Michigan

▲ For more details circle NED-619 G1 on enclosed inquiry slip ▲

ALL STEEL CONSTRUCTION

STAND or BENCH MOUNTED



¾ H.P.

NYE 101 POWER DRIVE

Yoke assembly (as illustrated) for threading 2½" to 4" pipe or conduit. Perfect balance — compact — direct power to threader. No long drive shaft.

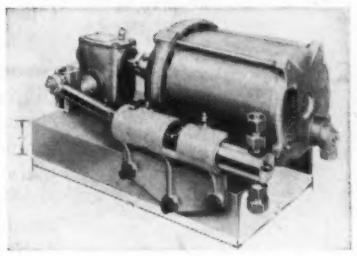
Quick opening die heads also available for threading ½" through 2" pipe or conduit. Fits into Nye saddle — perfect alignment —

Write for descriptive literature.

NYE TOOL COMPANY
4126 Fullerton Ave., Chicago 39, Ill.

▲ For more details circle NED-620 G1 on enclosed inquiry slip ▲

VARIABLE FLOW PUMPS
supply liquid to gravitometers



Powered by a ⅓-hp explosionproof motor and easily adjusted, Vari-Flow pumps function efficiently under extremely high pressure. They are designed to supply liquid to Anubis liquid gravitometers from high pressure lines where no differential is available. Model GSP-HP1, a single cylinder pump for up to 1000 psi, has an output volume of 0 to 2000 cc per minute, and is constructed of stainless steel. Two-cylinder Model GSP-HP2 for pressures to 1000 psi has a 0 to 4000-cc per minute output and similar construction. • **Arcco Instrument Co.,** 7144 E. Condor St., Los Angeles 22, Calif.

▲ For more details circle NED-622 G1 on enclosed inquiry slip ▲

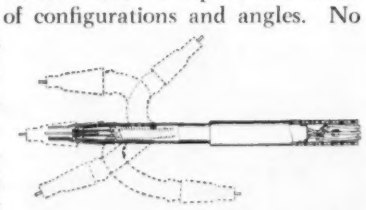
LOW-LIFT PALLET TRUCKS
2500 and 4500-lb capacities

Three standard fork lengths of 36, 42, and 48 in. and two widths of 20½ and 27 in. are available in this line of hydraulic low-lift pallet trucks. Capacities are 2500 and 4500 lb. Trucks are available with steel or rubber wheels at no extra cost, or optional polyurethane wheels. Price is $359.99 for the 2500-lb model and $395 for the higher capacity model. • **Prime-Mover Co.,** Third & Oak Streets, Muscatine, Iowa.

▲ For more details circle NED-623 G1 on enclosed inquiry slip ▲

CONTROLLED ANGLE TORCH
for tungsten inert gas arc welding

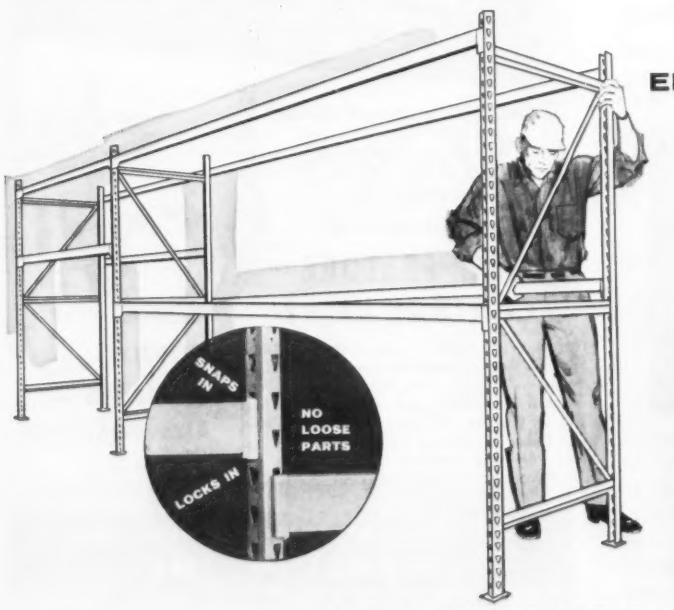
Flexible head of the CAT controlled angle torch can be quickly bent or turned with a flip of the wrist into a wide variety of configurations and angles. No wrenches or pliers are required to weld at any angle, even double-back 180 degrees, to suit requirements. Designed for tungsten inert gas arc welding in hard-to-reach areas, it also has a telescoping handle for longitudinal adjustment. A press fit ceramic cup keeps the electrodes centered and a tight seal keeps gas in and air out. Lead coated, copper braided power cables resist the corrosion of cooling water. • **Falstrom Co.,** 147 Falstrom Court, Passaic, N. J.



▲ For more details circle NED-624 G1 on enclosed inquiry slip ▲

fast assembly!
EMI *air-row head pallet racks*

only 2 basic parts—fast assembly—easy to relocate.



EMI *air-row head DRIVE-IN RACKS*
EMI *air-row head DRIVE-THRU RACKS*

These strong, efficient, space-saving racks are all engineered on the AIR-ROW Head principle with basic interchangeable parts.

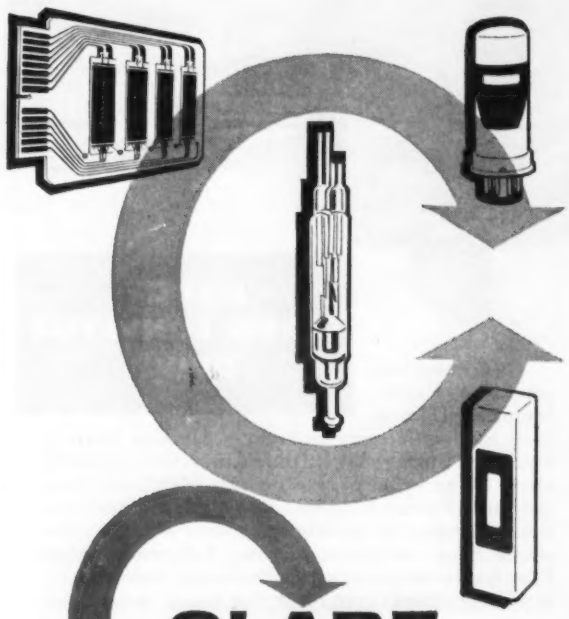
Before you build, remodel or add to a storage area, FIND OUT ABOUT AIR-ROW HEAD RACKS

WRITE FOR DETAILED INFORMATION

YOU CAN STACK ANYTHING ON **EMI** RACKS

EQUIPMENT MFG. INC.
21550 HOOVER ROAD • DETROIT 5, MICHIGAN

▲ For more details circle NED-621 G1 on enclosed inquiry slip ▲



CLARE
Mercury-Wetted Contact Relays

. . . flexible to meet every requirement

Clare mercury-wetted contact relays meet your circuit, mounting, and design requirements. You can have these versatile relays in printed circuit assemblies, as modules, conventional plug-in relays and other special assemblies. They are available with either of two basic switch capsules...HGS for especially fast, sensitive operation or HG for higher contact loads. Tested for billions of maintenance-free operations, these relays never get out of adjustment, never bounce or chatter.

IMMEDIATE DELIVERY AT FACTORY PRICES

EAST

R & D Supply, Inc.
1492 Highland Ave.
Needham 92, Mass.
Tel: Hillcrest 4-4500

Avnet Electronics Corp.
70 State Street
Westbury, L.I., New York
Tel: Edgewood 3-5800

Electronic Wholesalers, Inc.
1301 Hibiscus Boulevard
P. O. Drawer 1655
Melbourne, Florida
Tel: PA 3-1441

Electronic Wholesalers, Inc.
61 N. E. Ninth Street
Miami 32, Florida
Tel: FR 7-2511

CENTRAL

Relay Sales, Inc.
P. O. Box 186
West Chicago, Illinois
Tel: 231-1100

Srepco, Inc.
314 Leo Street
Dayton 4, Ohio
Tel: Baldwin 6-2546

Pioneer Electronics Supply Co.
2115 Prospect Avenue
Cleveland 15, Ohio
Tel: Superior 1-9411

M G Electronics & Equip. Co.
201-3 South 18th Street
Birmingham 3, Alabama
Tel: FA 2-0449

SOUTHWEST

Engineering Supply Co.
6000 Denton Drive
Dallas 35, Texas
Tel: Fleetwood 7-6121

Engineering Supply Co.
1124 East Fourth Street
Tulsa 10, Oklahoma
Tel: Diamond 3-8121

Harrison Equipment Co., Inc.
1422 San Jacinto St.
P. O. Box 1505
Houston 1, Texas
Tel: Capitol 4-9131

Busacker Electronic Equipment Co., Inc.
1216 West Clay Street
Houston 19, Texas
Tel: Jackson 9-4626

Radio Specialties Co., Inc.
6323 Acoma Road, S.E.
Albuquerque, New Mexico
Tel: Amherst 8-3901

Radio Specialties Co., Inc.
209 Penn Avenue
Alamogordo, New Mexico
Tel: Hemlock 7-0370

PACIFIC COAST

Puget Electro Products
5319 Fourth Ave., South
Seattle 8, Washington
Tel: Parkway 5-9700

Bell Electronic Corporation
306 E. Alondra
Gardena, California
Tel: Faculty 1-5802

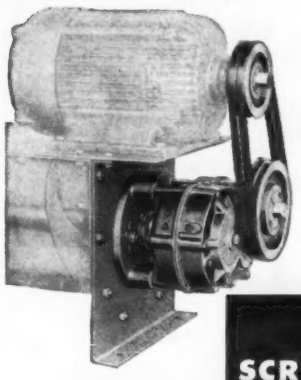
Bell Electronic Corporation
1070 O'Brien Drive
Menlo Park, California
Tel: Davenport 3-9431

Bell Electronic Corporation
8072 Engineers Road
San Diego 12, California
Tel: Browning 8-4350

C.P. Clare & Co., 3101 Pratt Blvd., Chicago 45, Illinois

C. P. CLARE & CO.
Relays and Related Control Components

▲ For more details circle NED-625 G1 on enclosed inquiry slip ▲



Entirely New!

Entirely Different!

DODGE SCREW CONVEYOR DRIVE

A complete package drive, including (1) rugged, high efficiency reducer — Timken Bearing equipped throughout, (2) quick-removable driving shaft, (3) external packing gland, (4) trough end, optional. Provides amazing new ease of installation—new ease of maintenance—new economy. No motor base—no thrust bearing. Ask your Dodge Distributor or write us for technical bulletin.

DODGE MANUFACTURING CORPORATION, 2100 Union St., Mishawaka, Ind.

DODGE

of Mishawaka, Ind.

For more details circle NED-626 G1 on enclosed inquiry slip

Lift Truck Attachments Put the HAND in "Handling"

With the appropriate attachment, you can take most any load and...

NEW Carton Clamp exerts equal pressure over entire surface to grip firmly without crushing. Arms are knife-thin—side shifting is standard.

Owners find a big dollar-saving difference in the performance, ease of servicing, and over-all durability of Allis-Chalmers lift trucks.

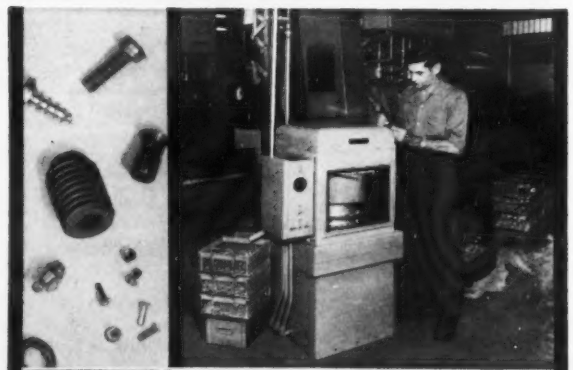
And these advantages are not confined to routine pallet-handling jobs, either. The full line of easy-to-mount attachments makes Allis-Chalmers lift trucks almost as flexible as your own two hands.

Have your Allis-Chalmers dealer show you how the right attachment quickly pays for itself by extending the usefulness of the lift truck — by moving a larger volume of material and by reducing damage. Allis-Chalmers, Milwaukee 1, Wisconsin. BH-171

ALLIS-CHALMERS

POWER FOR A GROWING WORLD

For more details circle NED-627 G1 on enclosed inquiry slip



Manpro Vibras utilize a unique vibrating spiral elevator to move work rapidly up through non-flammable cleaning solvents and vapors.

NEW VIBRA *Bantam* IN-LINE DEGREASER

This compact yet mighty degreaser (only 20 in. sq.) is priced and engineered to revolutionize production degreasing. Now, equip every small part manufacturing machine in your plant with a new Vibra *Bantam* at surprisingly low cost. Eliminate dripping tote pans. Cut manpower. Parts feed automatically, emerge chipfree, dry—ready for immediate inspection.

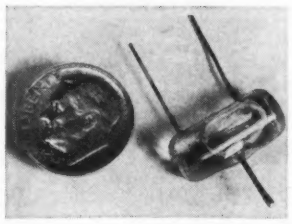
Write today for complete data on the New Vibra *Bantam*

MANPRO CORPORATION

26000 CAPITOL AVE., DETROIT 39, MICH.

For more details circle NED-628 G1 on enclosed inquiry slip

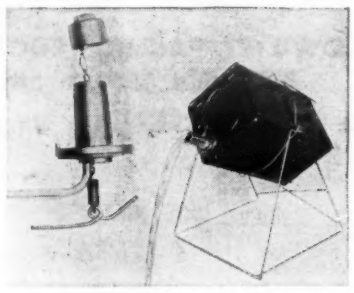
VERTICAL SENSING ELEMENT
miniature, snap-action, bubble type



One of a series of sub-miniature vertical sensing elements, this single axis, snap-action No. 228571-1 electrolytic unit can drive torque motors directly without amplifiers. The bubble-type on-off instrument cannot be nulled, and it has a tilt angle of 0.75 degrees. It is rated 18 v differential output and 18 ma maximum current through either contact. Unit operates between 75 and 135 min of arc. • **General Precision, Inc.,** Kearfott Div., 1150 McBride Ave., Little Falls, N. J.

For more details circle NED-629 G1 on enclosed inquiry slip

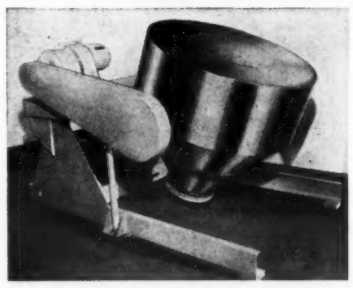
POURING SPOUT & STAND
facilitate dispensing of liquids



Jet Spout, shown at left in photo, is made in four sizes, is held in container by spring tension, and fits any size opening from 1¼ to 3 in. The tube at right angles is the vent to allow air to enter the container and give smooth, spurt-free pouring. Aluminum or plastic Model JS1 handles most liquids. Model JS2 will fit any threaded cap, and the Model JS3 fits ⅞ to 2¼-in. openings. A 12-in. long flexible spout extension is also available. The Rock-It Cradle will hold any 5-gallon round or square can or round bottle. A safety chain holds the container while liquid is being poured. Spouts sell for $1.50 to $3.50, and the cradle is priced at $4.95. • **B & R Stearns Mfg. Co.,** 4051 Foothill Blvd., Oakland 1, Calif.

For more details circle NED-630 G1 on enclosed inquiry slip

DRY SOLIDS MIXER
provides gentle dispersing action



Gentle dispersing action is combined with short mixing time in this stainless steel Strata-Screen mixer for blending dry solids. It can also blend particles of different weights. Revolving end-for-end on a trunnion, mixer achieves rapid and complete interchange of particles through properly sized screens mounted radially on a fixed cone at the base of the drum. Screens provide, in effect, thousands of slots for an infinite number of flow patterns with each revolution. Units with ½, ¼, ⅛, and 1/16-in. slotted screens are available. Optional hydraulic elevating feature makes floor level loading and unloading possible. Five to 7-rpm drives are standard. • **Hobam, Inc.,** Box 91-102, Buffalo 17, N. Y.

For more details circle NED-631 G1 on enclosed inquiry slip

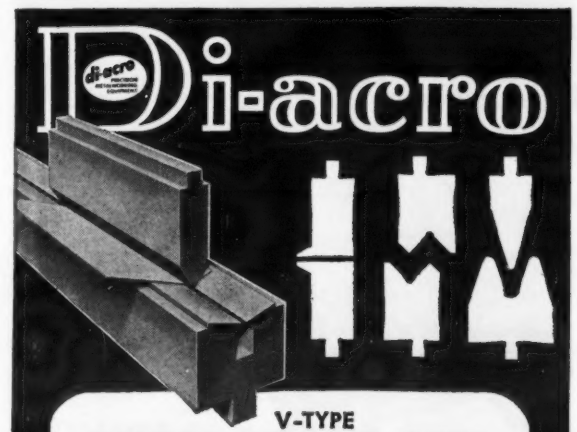
FILLER CAPS & ACCESSORIES
in 2, 1½, and ⅞-in. opening sizes

When open, Tedeco cast aluminum alloy filler caps have a conspicuously protruding cap. They cannot be dropped or lost, require no chains, and snap open

or closed firmly. Free-opening sizes of ⅞, 1¼, and 2 in. are available with either tight sealing O-ring or breather vent. Flush mountings, flange mountings with or without extension tube, and mountings, by inside or outside threading are provided. Strainers and dip sticks can be furnished. • **Technical Development Co.,** 303 S. Chester Pike, Glenolden, Pa.

For more details circle NED-632 G1 on enclosed inquiry slip

Di-acro



V-TYPE

PRESS BRAKE DIES and ROL-FORM DIES

Choose from a complete selection of heat treated V type press brake dies designed to fit all makes of press brakes. Standard lengths to 12 feet. Investigate the new Rol-Form dies that eliminate work marking on highly polished or painted materials. Most standard cataloged sizes can be shipped from factory stock.

Ask your Di-Acro distributor for details or write us.

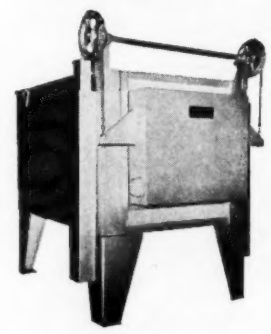
DI-ACRO CORPORATION

formerly O'Neil-Irwin Mfg. Co.

787 Eighth Ave. • Lake City, Minn.

For more details circle NED-633 G1 on enclosed inquiry slip

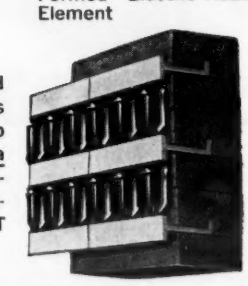
SOLVE HEATING PROBLEMS FOR CHEMICAL PROCESSING • DRYING • ACTIVATING



ONLY TRENT BOX TYPE FURNACES offer these performance advantages:

- Clean, Uniform Heat to 1260°C.
- Operate from Standard Voltages
- Standard Switches and Controls
- Require No Transformers
- TRENT "Folded and Formed" Electric Heating Element

Continuous "Folded and Formed" ribbon element faces the work chamber—gives up to 4 times the radiating area per given sections than ordinary types! Discuss your heating problems with TRENT engineers.



WRITE FOR BULLETIN 75-TD

TREN INC.

Electrically Heated Industrial Equipment

251 Leverington Ave., Phila. 27, Pa.

In Canada Pioneer Electric Eastern Ltd. Toronto

For more details circle NED-634 G1 on enclosed inquiry slip

If your equipment or process requires . . .

ACCURATE, AUTOMATIC TEMPERATURE CONTROL

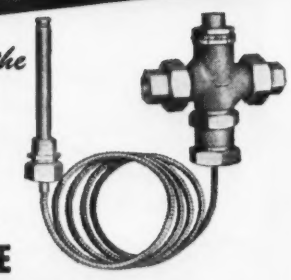
for HEATING or COOLING (using STEAM, WATER, or HEAT TRANSFER FLUIDS)

There is no equal to the

Sterlco®

Series 150-E

TEMPERATURE CONTROL VALVE



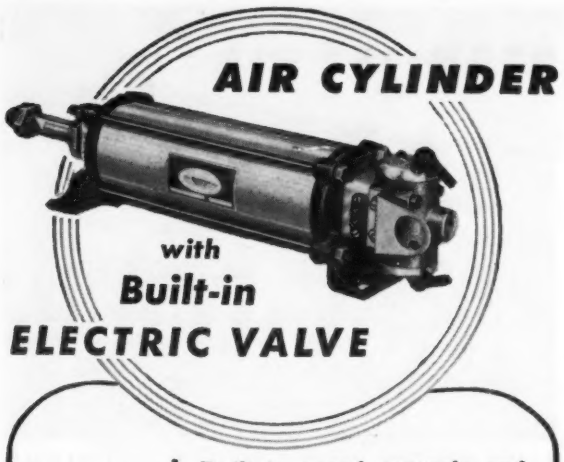
Here is a quality, dependable, and low cost self-actuated automatic modulating control valve. It's compact, self-contained; and, as part of your equipment or process, will eliminate the human factor of manual valves. Balanced single-seated construction eliminates effect of pressure variation. Send for Bulletin #505.

MOUNTS *and* OPERATES *in* ANY POSITION

INDUSTRIAL CONTROL DIVISION STERLING INC.

5204 W. Clinton Ave., Milwaukee 23, Wis.

For more details circle NED-635 G1 on enclosed inquiry slip



Write for Bulletin BM-25
Address:
Dept. NED-761
Bellows-Valvair
Akron 9, Ohio

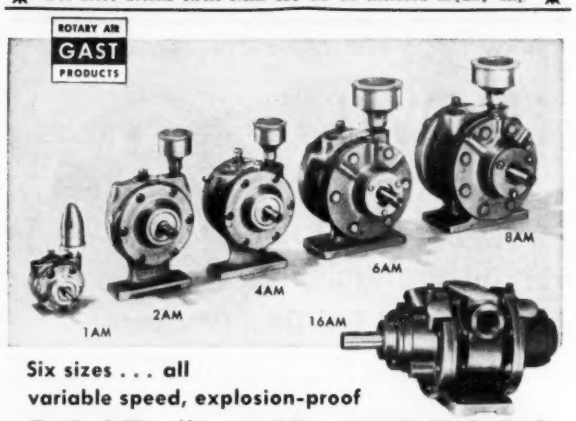
963-C

Built-in speed controls and electric directional valve give this Model BEM Bellows Air Motor® flexibility, speed and precision control. Low voltage makes it safe electrically anywhere. Requires only one air connection. Available in five bore sizes: 1¼", 1¾", 2½", 3⅝", 4½"—any stroke length.

Bellows-Valvair
AKRON 9, OHIO
DIVISION OF INTERNATIONAL BASIC ECONOMY CORPORATION (IBEC)

▲ For more details circle NED-636 G1 on enclosed inquiry slip ▲

ROTARY AIR GAST PRODUCTS



Six sizes . . . all variable speed, explosion-proof

GAST rotary vane AIR MOTORS

Need compact, low cost power? For plant use and original equipment applications, Gast rotary-vane Air Motors offer these distinct advantages:

1. Explosion-proof power. No danger!
2. Low initial cost per rated h.p.
3. Variable speed with valve control
4. Can't burn out from overloads.
5. Vanes take up their own wear.
6. Reversible rotation (opt.) 5 sizes.
7. Very compact — light in weight.
8. Top-quality ball-bearing design.

TYPICAL PERFORMANCE

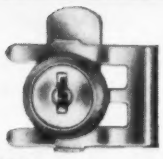
Model No.	H.P. at 90 PSI 2000 RPM	Weight lbs.
1AM	0.13	1½
2AM	0.57	5½
4AM	1.1	8
6AM	2.0	17
8AM	4.0	25
16AM	7.0	65

Gast Manufacturing Corp.
P.O. Box 117-R.
Benton Harbor, Mich.

Write for Bulletins — specify models!

GAST ROTARY
"Air may be your answer!"
• AIR MOTORS TO 7 H.P.
• COMPRESSORS TO 30 P.S.I.
• VACUUM PUMPS TO 28 IN.

▲ For more details circle NED-637 G1 on enclosed inquiry slip ▲

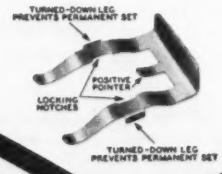


Clip in place on Corbin C15258 disc tumbler cam lock. Also available for other cylinder cam and desk locks.

CORBIN
CYLINDER CAM LOCKS WITH
Exclusive
CORBIN CLIP

save time!...cut costs!...never loosen!

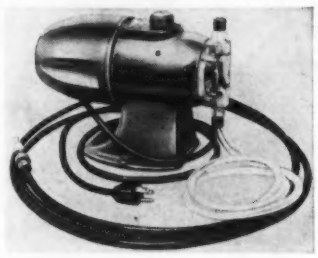
Like no other fastening device! Tempered spring steel. Patented design holds Clip securely in place—notches on clip engage notches on cylinder. Specially-designed legs of clip absolutely prevent a permanent set. No time-consuming, fumbling assembly operations. Just snap on 14, 16, 18, 20 and 22 gauge metal, also for other gauge metal on special order. Write for complete details.



CORBIN
CORBIN CABINET LOCK DIVISION
THE AMERICAN HARDWARE CORPORATION
NEW BRITAIN, CONNECTICUT

▲ For more details circle NED-638 G1 on enclosed inquiry slip ▲

DIAPHRAGM CHEMICAL PUMP
for acids and corrosive liquids



Suited for feeding practically any chemical solution against pressures to 100 psi, this Baco diaphragm pump is self-priming and air-purging. A simple dial adjusts feed rate in any amount up to 1 gal per hour. It is driven by a 115-v ac motor at 30 strokes per minute, and it weighs 8 lb. • **Bird-Archer Co.**, 4337 N. American St., Philadelphia 40, Pa.

▲ For more details circle NED-639 G1 on enclosed inquiry slip ▲

TINY TWO-WAY RADIO
ranges 2 miles on land, 5 on water

Each of two all-transistor citizens-band radio tranceivers is smaller than two packs of cigarettes, measuring just 5¼ x 2¾ x 1 3/16 in. The Ray-ette is a super-regenerative unit adapted for factory use where high electrical noise levels interfere with most other communications equipment. The Ray-ette Super employs superheterodyne circuitry for high sensitivity and selectivity. Both have high-impact polystyrene cases and are fitted with a 46-in. telescoping antenna with an interlock switch that assures set is off when antenna is retracted. Range is 2 miles over land and up to 5 miles over water. With rechargeable batteries, they weigh less than 15 oz. Respective prices are $79.95 and $99.95. • **Raytheon Co.**, Distributor Products Div., Unicenter, Westwood, Mass.

▲ For more details circle NED-640 G1 on enclosed inquiry slip ▲

VACUUM CLEANER-BLOWER
over 100 attachments available

Large rear wheels afford maximum mobility to this Model 105 All-Purpose machine which will vacuum clean, blow, air sweep, or spray. Unit is powered by a 1⅓-hp, two-speed, 115-v ac-dc motor and has a convenient attachment holder and a handle for easy maneuvering. As a vacuum cleaner, unit can be used with either 1½ or 2-in. hose and attachments. For blowing, air sweeping, or spraying, power unit is used separately from tank and held in the hand. Used for wet or dry pickup, cleaner has 15-gal tank of enamel finished steel or stainless steel. Over 100 standard attachments are available.

• **Ace-Sycamore, Inc.**, 448 DeKalb Ave., Sycamore, Ill.

▲ For more details circle NED-641 G1 on enclosed inquiry slip ▲

TORCH KITS
seven and ten-piece kits offered

Latest Bernz-O-Matic torch kits are complete in themselves, with all necessary accessories for plumbing and soldering work as well as paint and putty jobs. Illustrated "how-to" booklets in kits give step-to-step instructions for a variety of jobs. Seven and ten-piece kits are offered, with latter including a broad assortment of flux and solders to handle work in aluminum, brass, stainless steel, silver, copper, tin, and sheet metal. Kits come in heavy-gage, enameled steel boxes and range in price from $11.49 to $13.95. • **Otto Bernz Co.**, 740 Driving Park Ave., Rochester 13, N. Y.

▲ For more details circle NED-642 G1 on enclosed inquiry slip ▲

HOW MUCH WILL MECHANIZED FLOOR CARE SAVE YOU?

Figure it out by comparing the average time required for a man to mop your floors vs. *cleaning* them with a Clarke-A-matic Floor Maintainer:

FLOOR AREA IN SQ. FT.	ONE MAN WITH MOP	ONE MAN WITH CLARKE-A-MATIC	HOURS SAVED
20,000	20 hrs.	1½ hrs.	18½ hrs.
50,000	50 hrs.	4 hrs.	46 hrs.
100,000	100 hrs.	8 hrs.	92 hrs.

Translate this into dollar savings by multiplying your hourly labor cost by the hours saved with a Clarke-A-matic.

For example, if you have 50,000 sq. ft., it takes 50 hours with a mop, only fours with a Clarke-A-matic. You save 46 hours. Based on the national average labor rate of $1.50 per hour, *you save $69 every time you Clarke-clean your floors.*

And, Clarke-A-matic gets floors *clean*! It scrubs, picks up dirt and squeegee-dries, all in one self-propelled operation.

Ask to have your Clarke distributor tell you more about Clarke mechanized floor care. Write us today.

CLARKE FLOOR MACHINE CO.
DIVISION OF STUDEBAKER-PACKARD CORPORATION
227 E. Clay Avenue, Muskegon, Michigan

▲ For more details circle NED-643 G1 on enclosed inquiry slip ▲

WHERE CAN YOU USE THESE "TIME SAVERS FOR TOOL MAKERS"?

UNIVERSAL BORE GAGE is a simple holder to which any "Last Word" type indicator can be attached. For checking bores, O ring or snap ring grooves, thread reliefs, undercuts, etc. Range, with extensions, .200" to 6.000". Satin finish. With 4 pairs of points, wooden case, extensions, indicator. $48. Without indicator, $24.

CUTTER GRINDING FIXTURE for surface grinders. Sharpens all standard milling cutters up to 6" diameter. With bushings for ⅞", 1" or 1¼" bores, $49.

SWIVEL WHEEL DRESSER swings from 0 to 8" above chuck without cranking grinder spindle up and down. Adjusts either side of wheel, then locks. Precision ground, semi-steel base and arm casting. Serrated diamond chucks of hardened steel. With diamond, $49.

MACHINISTS' STEEL SQUARES. Save more than half the usual price! Accurate squares from England are precision ground all over with hardened and tempered blades.

2", $4. 4", $6. 6", $8. 8", $10. 10", $15. 18", $40. 24", $52. 30", $65.

FREE ...new 1961 guide to "Time Savers for Tool Makers." It's packed with time and work-saving tools you can put to good use in your toolroom and production line. Write for your copy today.

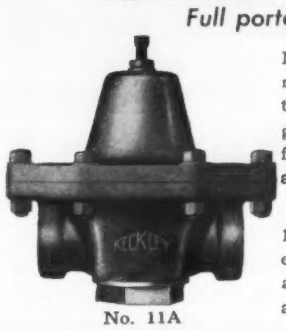
MONTGOMERY & CO. Inc.
415 Morris Ave. • Springfield, N.J.
DRexel 6-4767

All Montgomery tools are shipped on approval for 10 day free trial. We pay freight if check is sent with order.

▲ For more details circle NED-644 G1 on enclosed inquiry slip ▲

MORE VALVE FOR LESS MONEY

NEW! Pressure reducing valve
Full ported orifice



No. 11A

No. 11A and No. 11R pressure reducing and relief valves feature a full ported orifice for greater capacity and increased flow of steam, air, water, oil and gas.

Thus the No. 11A and No. 11R fit many applications presently requiring larger ordinary and/or more expensive valves at substantial savings.

The single seated No. 11A and No. 11R have a semi-steel body, bronze or stainless steel trim and composition disc; and are suitable for initial pressures up to 250 lbs. steam, 450° F.: 500 lbs. water, oil and gas, non-shock, 100° F. Reduced pressures range from 1 lb. to 100 lbs. Sizes 3/8" to 2".

Write for Bulletin No. 60

O. C. KECKLEY COMPANY
General Offices and Factory
3400 CLEVELAND ST., SKOKIE, ILLINOIS
KECKLEY
Pressure Regulators • Temperature Regulators • Float Valves
Strainers • Solenoid Valves • Reducing Valves
Pop Safety Valves • Relief Valves

▲ For more details circle **NED-645 G1** on enclosed inquiry slip ▲

New DAY "RJ" Dust Filter CONTROLS DUST SAVES DOLLARS

Because of its new, simplified design the DAY "RJ" dust filter will save you many dollars on initial investment, installation, operation and maintenance. Some of the important new construction features of this dust filter are: a new, quick-opening reverse-air, counter-flow valve for maintaining filter media porosity; a new, reverse-air pressure blower arrangement, and new, air tight, yet quickly opened inspection doors.

This patented DAY dust filter has only 3 moving parts but controls dust effectively, efficiently (99.99+%) and economically. It represents the latest refinement in a long-tested, plant-proven dust filter. Using felted filter sleeves to capture dust, the "RJ" is now available in 5 sizes for handling from 300 to 6400 CFM of air (for larger capacities, multiple groupings are furnished).

For more detailed information write toDAY for free Bulletin G-331. It's filled with facts, specifications and dimensions.

The DAY Company

SOLD in UNITED STATES by
The DAY SALES Company
866 Third Ave. N.E.
Minneapolis 13, Minn.
FEderal 6-9671

MADE and SOLD in CANADA by
The DAY Company of Canada, Ltd.
Rexdale (Toronto), Ontario, Canada
Fort William, Ontario, Canada
Rexdale, Cherry 1-8589

Representatives in Principal Cities

EXPERIENCE ENGINEERED . . . LABORATORY TESTED . . . PLANT PROVEN
Dust Control • Pneumatic Conveying • Bulk Storage
EQUIPMENT . . . SYSTEMS . . . INSTALLATION

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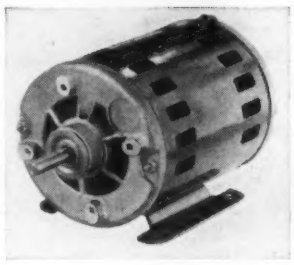
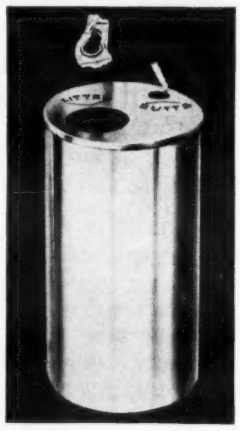
SMALL INDUCTION MOTORS with new base and end mountings



Added to G-E's line of 3 7/8-in. diameter induction motors are units with new solid bases and four-boss end mountings. Other improvements include use of Class B material for stator core insulation to ground and an epoxy "blue gray" varnish treatment for windings and stator shell finish. The redesigned line of compact 10-Frame motors is available in two-pole designs through 1/3 hp, and through 1/8 hp in four-pole single-phase designs in both horizontal and all-angle sleeve bearing open motors. Other modifications in this frame size are totally enclosed, ball bearing, and reluctance synchronous motors. • **General Electric Co.**, 1 River Rd., Schenectady 5, N. Y.

▲ For more details circle **NED-647 G1** on enclosed inquiry slip ▲

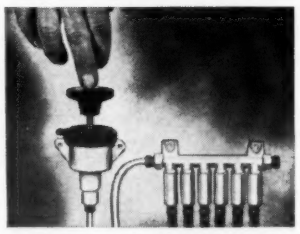
CIGARETTE-LITTER RECEPTACLE safely holds both types of trash



A 1/2-gal water reservoir for cigars and cigarette butts and a separate litter compartment are both provided by this Litter-Butt disposal unit. Each compartment is clearly marked, and the entire unit is covered to hide the debris. Large capacities of both compartments minimize the frequency of emptying. The 10-in. diameter, 18-in. high unit is made of bright stainless steel, and is available as a free-standing floor model or wall-mounted unit. • **D. J. Alexander Corp.**, 2944 E. Venango St., Philadelphia 34, Pa.

▲ For more details circle **NED-648 G1** on enclosed inquiry slip ▲

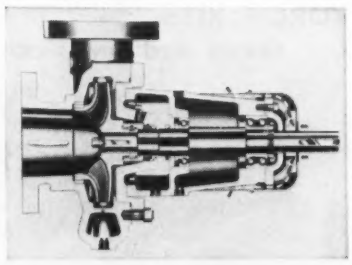
LUBRICATING SYSTEM centralized type oils 15 points



Up to 15 vital wear points can be lubricated by one push of the pump plunger of this hand-operated centralized lubrication system. Individual flow control to each fitting is achieved by independently operating meter-injectors which assure lubrication regardless of back pressure at the wear point. Integral pump and reservoir unit delivers pressure up to 200 psi and dispenses any lubricant that will pour. The 2-cu in. capacity of the reservoir will supply 1300 injection cycles. Meter manifolds are available with four, five, or six injectors, any one or more of which can be inactivated if desired. • **Walker Mfg. Co.**, 1201 Michigan Blvd., Racine, Wis.

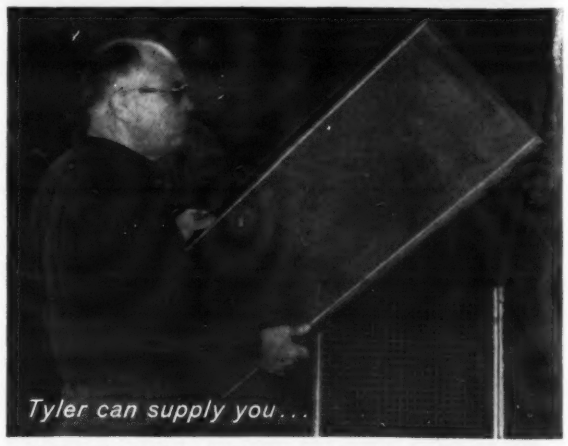
▲ For more details circle **NED-649 G1** on enclosed inquiry slip ▲

PROCESS PUMPS capacities to 1200 gpm



Two basic standard process pumps, the Type SMJ and SMJI, can be assembled into 72 basic combinations by interchanging impellers, covers, nozzle arrangements, bearing construction, cooling methods, and other components. They incorporate an air cooled bearing housing and a built-in fan cooling system. Type SMJ is designed for high temperature service (850° F) with either top or end suction. It has a water jacketed stuffing box for packing or a mechanical seal. Single or double stage construction and single or double suction are offered. Type SMJI is an internally sealed version with a mechanical seal as standard. Operating temperature is up to 400° F. Both types are available in capacities to 1200 gpm, differential heads to 1600 ft, and pressures to 1000 psi. • **Byron Jackson Pumps, Inc.**, Box 2017, Terminal Annex, Los Angeles 54, Calif.

▲ For more details circle **NED-650 G1** on enclosed inquiry slip ▲



FABRICATED WIRE CLOTH SECTIONS TO FIT EVERY VIBRATING SCREEN MADE

Tyler fabricates screen sections to fit all existing makes of vibrating screens, using wire cloth drawn from inventory, fabricated in a special department to give you fast delivery. Since Tyler originated the screen-tension concept, this service is backed by industry's broadest experience in producing screen sections—with special hook strips to maintain drum-head tension.

It's wise to order replacement woven wire cloth from Tyler—world's largest producer, with unequalled technical service to assure proper application. Call or write The W. S. Tyler Co., 3615 Superior Ave., Cleveland 15, Ohio.

TYLER
WOVEN WIRE SCREENS • SCREENING MACHINERY • TESTING SIEVE EQUIPMENT

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NEW FROM ROCHESTER INSTRUMENTS . . .

NOW!

The first direct-action differential pressure gauge

Simply designed, this gauge measures pressure drop between two points, or will indicate flow in a system. The system pressure exerts its force against the bottom side of the diaphragm while the downstream pressure is exerted against the top of the diaphragm. The resulting difference (pressure drop) is mechanically transmitted through an "O" ring type seal to a unique linkage system to move the pointer and indicate "Differential Pressure" on the dial. A heavy-duty restrained diphragm type indicating gauge, its differential pressure range is 0-15 psi through 0-150 psi. The maximum system pressure is 150 psi. Dials may be zoned or calibrated with 10-0-10 through 75-0-75 scales available. Stem front flange or panel mount.

Write for complete information, Cat. Sheet No. DPI-60.
American Standard, Controls Division
Rochester Instrument Plant
114 Rockwood St., Rochester 10, N. Y.

AMERICAN-Standard
CONTROLS DIVISION

▲ For more details circle **NED-652 G1** on enclosed inquiry slip ▲

READ any surface temperature in 3 seconds with Alnor® PYROCON®

Particularly, in the lower temperature range, the Alnor Pyrocon has extreme accuracy unmatched by any other instrument of its type.

Alnor offers the widest variety of interchangeable tips for reading temperatures on metallic or non-metallic, flat, curved, revolving or stationary surfaces as well as semi fluid materials, plastics, liquids, molten or soft metals, dies, rubber, waxes and many other surface or subsurface materials.

The Pyrocon is a compact, rugged instrument built with the highest standards of accuracy and dependability as well as speed in reading.

Eight models with temperature ranges from 0—300°F. to 0—2000° F.
Write for bulletin 4257.

Alnor INSTRUMENTS
ALNOR INSTRUMENT CO.
Division of
Illinois Testing Laboratories, Inc.
Rm. 529, 420 N. LaSalle St., Chicago 10, Ill.

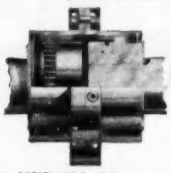
▲ For more details circle **NED-653 G1** on enclosed inquiry slip ▲

Angular Drive Design

Made Possible with

AJAX Dihedral Couplings with a wide range of angular and offset capacities provide smooth running angular drives with constant peripheral speeds in minimum space. Results include compact size, improved performance, elimination of breakdowns and reduced maintenance cost. Write for performance data.

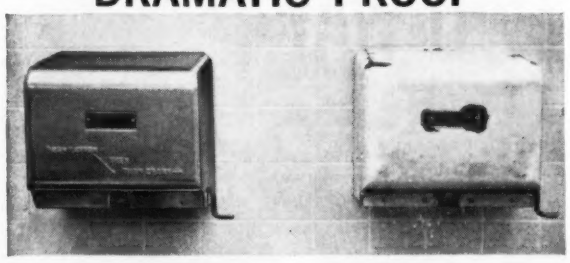
AJAX FLEXIBLE COUPLING CO. INC.
142 Portage Road
WESTFIELD, N. Y.



DIHEDRAL COUPLINGS
Representatives in Principal Cities
See Yellow Pages

For more details circle NED-654 G1 on enclosed inquiry slip

DRAMATIC PROOF



Turn-Towl's aluminum cabinet wears while others just wear out

Turn-Towl put its own cabinets to the test in the slaughter room of a midwestern meat packing plant. First, the familiar white enamel towel cabinet (like those supplied by most paper towel services) was used a year. Then Turn-Towl's polished aluminum cabinet replaced it — looked just as new 18 months later when it was taken down and photographed.

Other equally dramatic field tests have been made in schools, chemical plants, hospitals. Names are available on request.

For the name of your nearest distributor — who will demonstrate Mosinee Turn-Towl service and arrange for a free trial, if you wish — write Dept. 1084.

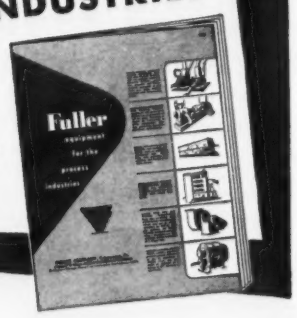
MOSINEE Sulphate Towels
BAY WEST PAPER CO.
GREEN BAY • WISCONSIN
Subsidiary of Mosinee Paper Mills Co.

For more details circle NED-655 G1 on enclosed inquiry slip

FREE BULLETIN

FULLER EQUIPMENT FOR THE PROCESS INDUSTRIES

12 pages of Photos Diagrams Charts



. . . tell you and show you how to move mountains of dry pulverized, crushed and granular materials to and from, up, over, around and under your plant to storage . . . and from storage to processing points . . . and do it economically.

It's called Fuller Equipment for the Process Industries. Just write for Bulletin G-3 . . . today. 1358 G211

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154 Bridge Street
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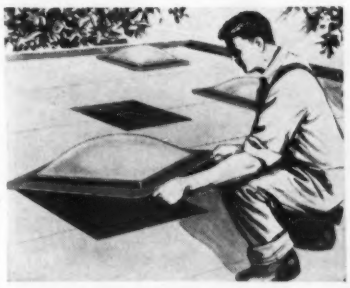
SUBSIDIARY OF GENERAL AMERICAN TRANSPORTATION CORPORATION
Offices in Principal Cities Throughout The World
"See Chemical Engineering Catalog for details and specifications."

For more details circle NED-656 G1 on enclosed inquiry slip

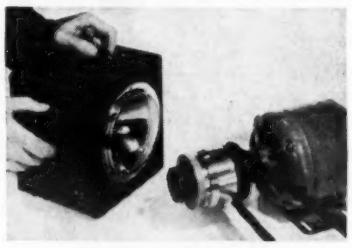
FIRE-RETARDANT SKYLIGHT
offered in colors and white



Fire resistance, light transmission and diffusion, strength, light weight, and weathering qualities are combined in Consolite skylights, made of Hetron self-extinguishing polyester resin. The dome-shaped plastic units are shatter and crack proof and are made in various sizes and shapes. Pasteltone Consolites in pale blue, yellow, green, pink, and mist white, in single or double domes, will harmonize with almost any color scheme. For added durability, the molded units are coated with Hetrolac 105, an acrylic lacquer incorporating an ultra-violet absorber. • **Consolidated General Products, Inc.**, 2401 Nicholson, Houston 8, Tex.

For more details circle NED-657 G1 on enclosed inquiry slip

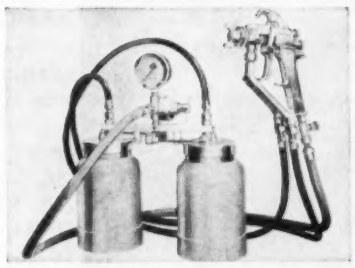
POCKET DYNAMOMETER
2½-lb instrument slips on shaft



Torque and power loading of small electric motors can be measured in the field by this pocket size dynamometer. Installed on the motor shaft in place of the regular pulley, it uses interchangeable, hand-tightened collets in a wide range of shaft sizes. A self-contained V-belt pulley is adjustable in diameter from 2 to 3½ in. An adapter is provided for direct drive to hubs, spokes, and gears. In operation, the dynamometer is viewed by a stroboscopic tachometer while rotating. Transmitted torque is read from the dynamometer dial and speed is read from the stroboscope dial. Horsepower is then calculated or read from a chart. Model 63 indicates up to 22 lb-in. in either direction, accurate to 0.5 per cent. • **Micro Pump Corp.**, Box 392, Danville, Calif.

For more details circle NED-658 G1 on enclosed inquiry slip

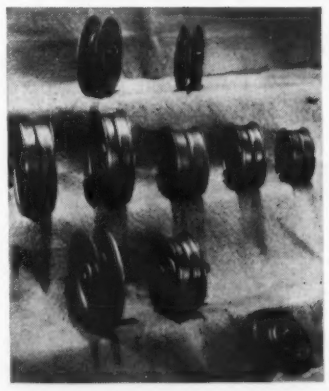
SPATTER SPRAY UNIT
for two-color paint spraying



Two-color paint spraying is performed by this spatter spray unit which consists of a Binks Model 19 spray gun connected to two paint cups, an air adjusting valve, and the necessary hoses and fittings. Either 1 or 2-qt paint cups are available. The two colors flow in separate hoses to the spray gun where they are mixed just prior to being sprayed. Mixing inside the gun is controlled to insure proper finish appearance. • **Binks Mfg. Co.**, 3140 Carroll Ave., Chicago 12, Ill.

For more details circle NED-659 G1 on enclosed inquiry slip

IDLER BEARINGS
have good lateral stability



Belt tighteners, clutches, belt guides, and idlers are typical applications for this line of low cost idler pulley units. Each full complement, double row, ball bearing has hardened, deep groove races for high load carrying capacity and good lateral stability. Units consist of symmetrical sheave halves spot welded together around the bearing. Various types are adaptable to applications requiring flat or V-belts. An extended inner race on one side gives mounting clearance and eliminates the need for spacers. Bearing bores fit standard machine bolt sizes. Units are prelubricated and completely sealed. • **New Hampshire Industries, Inc.**, Box 411, Hanover, N. H.

For more details circle NED-660 G1 on enclosed inquiry slip

T ...MARK OF A SPEED NUT®

Easy to open, easy to close... with a grip that can't shake loose

• Open...close Tinnerman Harness Clamps with one hand—no tools required • safe, interlocking tongue and slot can't spring open accidentally, yet opens readily for servicing • neoprene cushion protects insulation, absorbs variations in bundle size • made for *total reliability* • complete selection

Write for free descriptive literature

LOOK FOR THE TINNERMAN "T"!

TINNERMAN PRODUCTS, INC.
BOX 6688 • DEPARTMENT 12 • CLEVELAND 1, OHIO

For more details circle NED-661 G1 on enclosed inquiry slip

T ...MARK OF A SPEED NUT®

Applied by hand, tightened with pliers ...that quick and it's on to stay!

• Tinnerman Hose Clamps—ideal for securing low-pressure air, vent or drain lines • applied in seconds • advanced design—lightweight, one-piece, low profile • adjustable—one clamp covers wide range of hose diameters • made for *total reliability* • many size variations • may be re-used indefinitely

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LOOK FOR THE TINNERMAN "T"!

TINNERMAN PRODUCTS, INC.
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For more details circle NED-662 G1 on enclosed inquiry slip

T ...MARK OF A SPEED NUT®

They hold tubing with a grip of steel...

• Vibration-proof Tinnerman Tube Clamps save weight, assembly time, costs • reduce inventory stocking and parts handling • may be ordered with self-retaining SPEED NUT, neoprene flame-resistant cushion • made for *total reliability* • sizes, shapes for wide range of applications

Write for free descriptive literature

LOOK FOR THE TINNERMAN "T"!

TINNERMAN PRODUCTS, INC.
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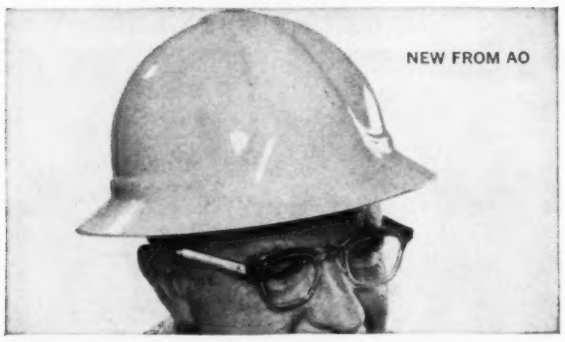
Nothing like it! Pocket size. Complete data on selection of rods and electrodes for welding stainless, low alloy, non-ferrous and light metals. Gives facts on applications, currents, preheating, annealing, AWS/ASTM classifications. Special sections on How to Get Better Stainless Welds, and Effect of Alloying Elements on Weld Metal. Comprehensive list of valuable technical data available. FOR FREE COPY write ARCOS CORPORATION, 1500 South 50th Street, Philadelphia 43, Pa.

ARCOS | *Filler Metal Specialists*

For more details circle **NED-664 G1** on enclosed inquiry slip



One Safety Hat to meet all needs

It's the AO Dura-Guard, an *all-new* safety hat or cap designed for universal use. Meets or exceeds all standard specifications. Made entirely of plastic without metal parts, *every* Dura-Guard may be worn where dielectric protection is required. Dielectric strength in accordance with E.E.I. specifications (April 1954) is available in individually tested hats and caps. **Shell** . . . injection molded for uniform thickness in critical areas, smooth polished finish. **Suspension** . . . dual fixed and adjustable "X"-shaped suspension assures maximum protection; all-plastic—light, comfortable, easy to clean, long lasting. **Headband** . . . polyethylene; one headband only, adjusts between sizes 6¼ and 8 on both sides to *stay centered* in shell. **Sweatband** . . . easy-to-remove, two-piece construction simplifies cleaning, minimizes replacement cost. Write for details.

Your Surest Protection . . . AO SURE-GUARD Products

American Optical COMPANY
SAFETY PRODUCTS DIVISION
Southbridge, Massachusetts

Safety Service Centers in Principal Cities

For more details circle **NED-665 G1** on enclosed inquiry slip

PUMPS THAT "GROW"

Versatile Centrifugal

The DEMING Co.
706 BROADWAY • SALEM, OHIO

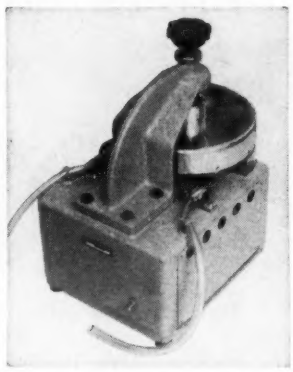
For more details circle **NED-666 G1** on enclosed inquiry slip

TRUCK-MOUNTED HOIST
lifts and lowers ½-ton loads

Telescopic boom which is adjustable in length and height, remote push-button control, and 360-degree swing for back or side loading are features of the Pacific hoist, mounted on a truck and powered by its 6 or 12-v battery without change in the electrical system. Forty feet of hoisting cable is supplied. Hoist can be removed when necessary. • **Burtchaell Heating Co.**, Hoist Div., 2944 S.E. Powell Blvd., Portland 2, Oreg.

For more details circle **NED-667 G1** on enclosed inquiry slip

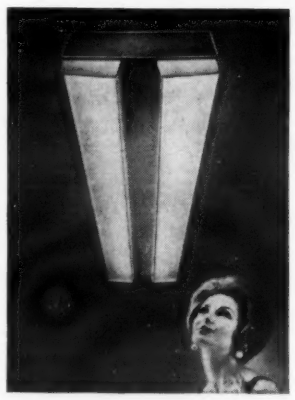
PULSATION-FREE PUMPS
will not contaminate liquid or gas



Noncontaminating, pulsation-free pumping of liquid or gas with adjustable speed and flow rates is performed by Aminco peristaltic-action pumps. Simple transfer of corrosive materials from one container to another is typical use. Two models afford maximum flow rates of up to 15 and 600 ml per minute of water and 30 and 35 ml per minute of gas, respectively. Pumping is achieved by a circular rotor rimmed with rollers which pass over and depress a plastic or rubber tube clamped in a semi-circular metal groove. Liquid movement in the tube is steady. • **American Instrument Co.**, 8030 Georgia Ave., Silver Spring, Md.

For more details circle **NED-668 G1** on enclosed inquiry slip

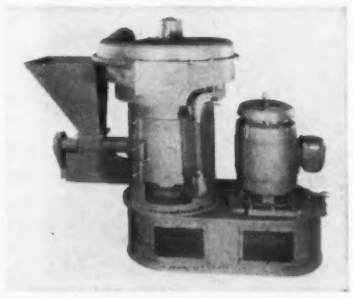
TWIN-LENS FLUORESCENT LIGHT
distributes light evenly



Optically controlled illumination is provided by the Duplex-a-lite, a twin-lens fluorescent lighting fixture which mounts on the ceiling. Optically designed prismatic lenses direct and distribute most of the light downward to the work plane and away from the critical 45 to 90-degree viewing zone. Ceiling and center channel cover are softly illuminated. Fixture is available in 4 and 8-ft lengths for Rapid Start and Slimline lamps, with choice of clear, acrylic, or light stable polystyrene lenses. Width is 13 9/16 in. Each lamp is enclosed by a self-hinging plastic lens which is supported by continuous flanges on the channel. Unit can also be suspended. • **Miller Co.**, Dept. PR-561, Meriden, Conn.

For more details circle **NED-669 G1** on enclosed inquiry slip

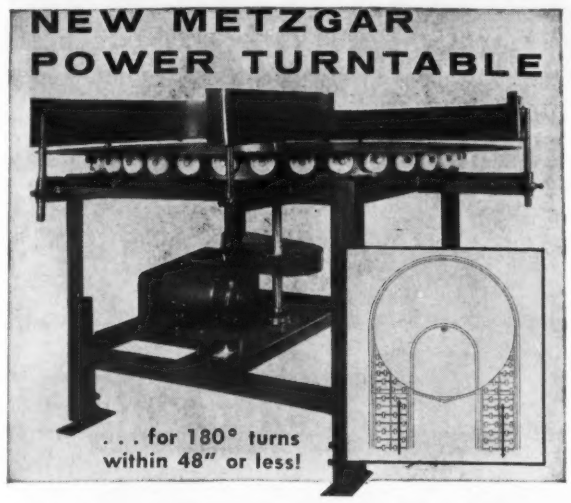
PULVERIZER-CLASSIFIER
reduces material to 1-micron fineness



Various dry materials can be reduced to a fineness of less than 1 micron, then accurately classified by the Hurricane pulverizer - classifier. The air attrition mill can reduce and classify up to 1500 lb of hydroxy ethyl cellulose per hour and has successfully reduced sodium carboxy methyl cellulose in quantity lots. It is also useful for reduction of pigments, asbestos, and food ingredients, and can be used in many other applications requiring fine grinding of dry materials. • **Bauer Bros. Co.**, 1753 Sheridan Ave., Springfield, Ohio.

For more details circle **NED-670 G1** on enclosed inquiry slip

NEW METZGAR POWER TURNTABLE



• Motor-driven, circular steel table rides noiselessly on bed of Metzgar Nylo wheels • Can be equipped with single or multiple entry and departure points for any turn or turns up to 180° • Steel guide rails to maintain alignment • Costs much less than power belt or live roller installation effecting same degree of turn • Standard table diameter 48" — smaller or larger models to your specs.

SEE YOUR METZGAR REPRESENTATIVE OR WRITE FOR FULL DETAILS

METZGAR CONVEYOR CO.
416 Douglas St. N.W., Grand Rapids 4, Mich.
WHEEL & ROLLER GRAVITY CONVEYORS • LIVE ROLLER CONVEYORS
POWER BELT CONVEYORS • SWITCHES • ACCESSORIES

For more details circle **NED-671 G1** on enclosed inquiry slip

TWO-WAY SPEED and ECONOMY

LIVE ROLLER CONVEYOR

NEW V-BELT DRIVE TRANSFORMS *GRAVITY*-FLOW TO *POWER*-DRIVEN FLOW . . . IN SECONDS!

Two conveyors in one! V-Belt drive gives positive alignment and traction; adjustable pressure wheel system minimizes line pressure. Handles all packages, pallets. 12, 18, and 24-inch widths. **Write:**

VERSA Corporation
BOX 152, MT. STERLING, OHIO

For more details circle **NED-672 G1** on enclosed inquiry slip

DARCOVA PUMCUPS
now available with
100% NYLON COMPOSITION
for HYDRAULIC CONTROLS, AIR CYLINDERS, RECIPROCATING PUMPS

Darcova Pumcup

DARCOVA PUMCUPS—long noted for unequalled efficiency and life in all kinds of cylinders—are now greatly exceeding their own performance records! The new 100% Nylon Composition, available *only* in Darcova Pumcups, does it!

Nylon Pumcups are made in sizes, types and textures exactly right for your particular equipment—ready *now* to give you unprecedented piston packing performance!

Write for helpful data Bulletin No. 5903.

Darcova 45° Bevel Type Pumcup

DARLING VALVE & MANUFACTURING CO.
Williamsport 14, Pa.

DARCOVA
TRADE MARK
PUMCUPS

For more details circle **NED-673 G1** on enclosed inquiry slip

NOW! Use this Portable Bag Closing Machine

CLASS 2100

HERE is a handy little machine that makes bag closing fast, easy, and economical. It is recommended where operations are limited or intermittent and do not justify installation of large, high production machines.

LIGHTWEIGHT—9½ pounds. Carry it anywhere. No installation; requires only an electrical outlet.

POWERFUL—Direct drive motor with thumb control button. Exclusive top and bottom feed for greater power and production.

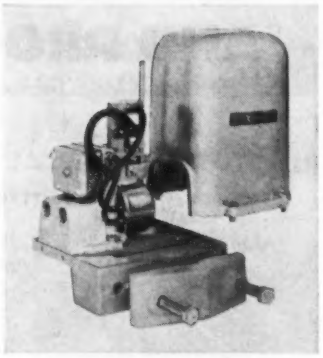
VERSATILE—Closes bags made of cotton, burlap, jute, multiwall paper, laminated paper.

SAFE—Anyone can operate it. No special training required. Comes with shoulder strap or can be obtained with overhead suspension. Send for descriptive literature.

Union Special® MACHINE COMPANY
FINEST QUALITY 416 N. Franklin St., Chicago 10, Ill., U.S.A.

For more details circle NED-674 G1 on enclosed inquiry slip

DIRECT-CURRENT TRANSMITTER transmits pneumatically to receiver



Type 19A direct-current transmitter, which measures dc and transmits pneumatically to a central receiver, handles current ratings to hundreds of thousands of amperes such as encountered in electrolytic refining and plating. Operation is inferential, based on sensing at a distance the magnetic field established by flow of dc through a bus bar conductor. Magnetic deflection of flexure-pivoted magnet operates a flapper-nozzle detector in a pneumatic force-balance system. The 3 to 15-psi pneumatic output, linearly proportional to magnitude of current flow, is transmitted to a remote receiver. Accuracy is within ±0.5 per cent of maximum current value. While maximum current is unlimited, minimum current for full scale measurement is 0 to 5000 amp. • **Foxboro Co.**, 26 Neponset Ave., Foxboro, Mass.

For more details circle NED-677 G1 on enclosed inquiry slip

CLOSURES

To Protect Threads, Tubes, Valves, Components, etc. from Dirt and Mishandling
Available from Stock

Special Closures Manufactured to Customers' Specifications, of Aluminum or Polyethylene. Quotations on request, furnish description desired including thread size.
Manufacturers of Industrial Closures Since 1944

CLOVER INDUSTRIES, INC. 601 Young Street Tonawanda, N. Y.

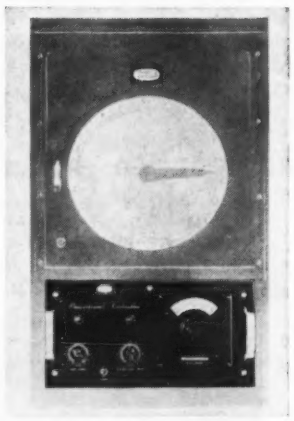
For more details circle NED-681 G1 on enclosed inquiry slip

LIP SEAL INSPECTION MACHINE checks up to 1200 seals per hour

Lip seals are checked for proper diameter and lip pressure at a rate of 1200 seals per hour by this automatic Sealector inspection machine. It clamps the seals in a series of three adapters and gages the flow of compressed air past the lip. Constant-pressure air flow between the seal and low and high diameter shafts checks the inside diameter. Air pressure necessary to produce a standard flow of air past the seal lip checks lip pressure. Each of the three checking stations is followed by a reject station which ejects seals failing a test. The 700-lb, 60 x 30 x 30-in. machine operates on 110 v ac and 60 psi or more of compressed air. • **General Motors Corp.**, Research Laboratories, 12 Mile & Mound Roads, Warren, Mich.

For more details circle NED-678 G1 on enclosed inquiry slip

PROPORTIONAL PROCESS CONTROLLER for practically any process



Accurate control of temperature, pressure, pH, chemical concentration, liquid level, or practically any process is achieved with this thermo electronic proportional controller. It is used in conjunction with primary instruments, such as indicators or indicating recorders having transmitting slidewires. Accuracy is within ¼ per cent of controller span as referred to accuracy of primary instrument. It performs on-off control with almost imperceptible cycling and will not permit process conditions to exceed preset limits. All control adjustments are located on the front panel and are noncritical over a wide range of process variations. A fail-safe circuit is incorporated. • **Thermo Electric Co.**, Saddle Brook, N. J.

For more details circle NED-679 G1 on enclosed inquiry slip

Heat Exchangers, Aftercoolers & Air Filters

FREE R. P. Adams Co.—Latest information on Adams 15, 10, and 2° F aftercoolers and on new shell and tube type heat exchangers is presented in 8-page Bulletin 715. Aftercoolers are available in sizes to handle up to 50,000 cfm of air at pressures to 1000 psi. Also covered is the Economat heat exchanger which combines a pipe line aftercooler and cyclone separator.

For more details circle NED-680 G1 on enclosed inquiry slip

QUICK, EASY SET-UPS for ANGLE or off-line DRILLING

Handle angle or off-line drilling jobs quickly, easily and economically with the new Commander Type "A" Multi-Angle Drill Unit. The unit is designed to permit quick attachment to a flexible shaft or an electric motor power source. A two-way cylinder is incorporated to provide spindle feed and return.

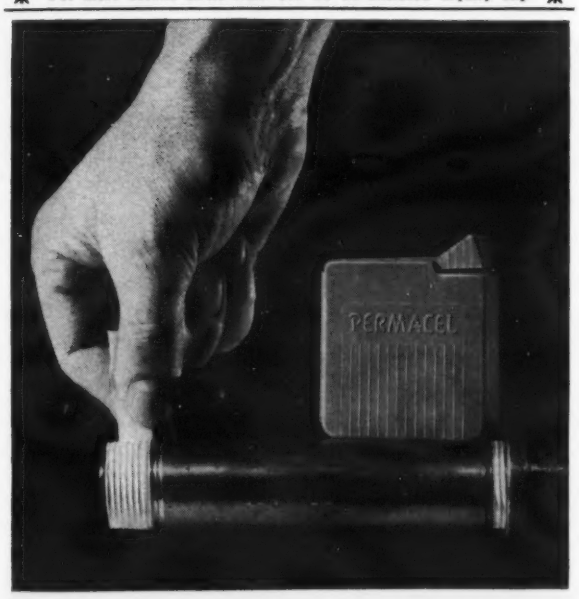
Small size and long stroke (4") make the Type "A" Multi-Angle Drill Unit ideal for a wide variety of production drilling set-ups.

Write for complete details, illustrated catalog, and name of nearest Commander Distributor.

113

Commander MFG. CO.
4220 WEST KINZIE STREET • CHICAGO 24, ILLINOIS

For more details circle NED-675 G1 on enclosed inquiry slip



RIBBON DOPE (trademark) Thread Sealant by Permacel—the self-lubricating, universal sealant made of pure Teflon* for all threaded connections, metal or plastic . . . including oxygen breathing apparatus.
*Du Pont trademark

PERMACEL® NEW BRUNSWICK NEW JERSEY
Tapes • Electrical Insulating Materials • Adhesives

For more details circle NED-676 G1 on enclosed inquiry slip

KEEP COOL AT LOW COST

HUNTER AIRSPREAD FANS
NOW EQUIPPED WITH
Super Safety Guards at no extra cost

■ Heavy-duty fans effectively cool large areas. Available with 24" or 30" blades in pedestal, bench, wall or ceiling models. 2-speed capacitor-type motors, totally enclosed.

SPOT COOL WITH FAMOUS HUNTER OSCILLATING FANS

For floor, table or wall-mounted use. 16½" blade. Super Safety Guard supplied at no extra cost.

Contact your electrical wholesaler or one of the following Hunter sales offices:

NEW YORK, 57 Murray Street, BEekman 3-5773
CHICAGO, 5517 West Montrose Ave., SPring 7-7911-12
MEMPHIS, 2500 Frisco Ave., FAirfax 7-8421
LOS ANGELES, 7755 Paramount Place, Pico Rivera, RAymond 3-3623

For catalog and prices, write
HUNTER DIVISION—ROBBINS & MYERS, INC.
2500-ND Frisco, Memphis 14, Tenn.

For more details circle NED-682 G1 on enclosed inquiry slip

efficient and fast...
ELLIOTT
BOILER TUBE
EXPANDERS

for
boiler tubes
¾ in. I.D. and up

All Elliott boiler tube expanders are available with drum, header, or short series mandrels. A drum mandrel is seen with the above Type K expander. For descriptive literature, write the Elliott Company, Lagonda Division, Springfield, Ohio, for Bulletin Y-46.

Y7-6

ELLIOTT Company
For Tube Cleaners, Expanders and Accessories

▲ For more details circle NED-683 G1 on enclosed inquiry slip ▲

NOW
Spot check humidity anywhere!

NEW Honeywell portable humidity indicator with direct read-out

This indicator is completely self-contained. Power from integral long-life mercury batteries. Provides approximately 100 hours of service, enough for thousands of readings. Overall relative humidity indicating range of 10 to 100% R-H. Responds and indicates changes in relative humidity with accuracies to 1½% R-H. Supplied with each indicator are six indicating dials used in conjunction with the six sensing elements of the corresponding ranges.

- Direct R-H Read-out
- Temperature Compensating Thermistor
- Portable
- Transistorized
- Wide Indicating Range
- Accurate

Honeywell
First in Control
SINCE 1885

Send to Honeywell, Dept. NA-7-56, Minneapolis 8, Minnesota.

Please send additional information on the Honeywell Portable Humidity Indicator.

Name_____

Address_____

City_____ State_____

▲ For more details circle NED-684 G1 on enclosed inquiry slip ▲

NEW MATERIALS AND PROCESSES

PLASTIC ELECTRICAL TAPE in automatic cutter-dispenser

Ease of use for Slip-Knot plastic electric tape is afforded by this Flip-N-Cut instant cutter-dispenser. Required length of tape is merely pulled out of dispenser and cut with a flip of the fingers. Tab of tape is left extended for next application. Three job-matched sizes are now offered and include 66-ft, 44-ft, and 30-ft rolls of ¾-in. wide adhesive plastic electrical tape. • **Plymouth Rubber Co.**, Revere St., Canton, Mass.

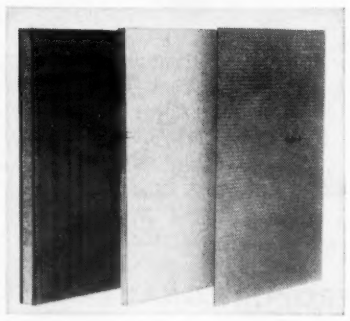
▲ For more details circle NED-685 G1 on enclosed inquiry slip ▲

COMBUSTION CATALYST promotes complete burning of fuels

Added to such fuels as oil and coal, Harco combustion catalyst promotes complete combustion and eliminates almost entirely smoke, soot, scale deposits, and stack emissions. It is added to industrial fuels at a ratio of 1 gal to 10,000 gal of oil, or 1 gal per 50 tons of coal. With high sulfur-vanadium content oils or other fuels, catalyst assures clean, corrosion-free equipment because of more complete calcination of the ash components. Product is anticorrosive in its effect in flue gas passages, and can also be modified to act as a highly effective carbon scavenger for diesel fuels. • **Harco Chemical Co.**, 338 North Ave., Cranford, N. J.

▲ For more details circle NED-686 G1 on enclosed inquiry slip ▲

LAMINATED MELAMINE PANELS for furniture, walls, display cases

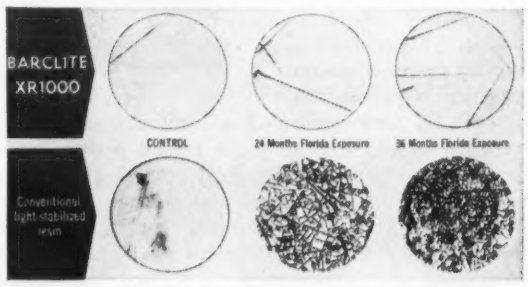


Laminated melamine panels can be used on a wide range of vertical and horizontal applications. These include special-purpose furniture, wall paneling, and display cases. In addition to standard finishes, these thin, high-impact resistant laminate sheets are made in embossed patterns, integral color designs, overlay patterns, and many wood grains and decorator colors. • **Bourne Mfg. Co.**, Special Products Div., 7321 Gratiot Ave., Detroit 13, Mich.

▲ For more details circle NED-687 G1 on enclosed inquiry slip ▲

REINFORCED GLASS FIBER PANELS weather resistance improved 5-fold

"Torture tests" conducted with SR1000 reinforced glass fiber panel indicate that its resistance to the eroding effects of the elements and its retention of light trans-



mission properties have been increased five-fold. Panel is suitable for skylighting, roofing, glazing, awnings, fences, or any commercial or industrial installation. Color retention is about 2⅓ times better. Shatterproof panel is formulated to remain cool while reducing the sun's infrared penetration. It is offered in 15 colors in step down, corrugated, or flat styles with smooth or crinkle finish, and in striped patterns. Photo shows comparative weather erosion effects. • **Barclite Corp. of America**, Dept. X43, 385 Gerard Ave., New York 51, N. Y.

▲ For more details circle NED-688 G1 on enclosed inquiry slip ▲

WHEN YOU NEED HELP IN A HURRY-

Koppers coupling service cuts costly down-time

Not every coupling service need is an emergency. But it's the emergencies that really test a good organization. That's why Koppers maintains experienced field engineers and outstanding stock facilities throughout the country. In addition, if it's a Fast's Coupling you're replacing, we have a serial number and specific application history for every Fast's for easy reordering. And our modern manufacturing facilities have the extra capacity to lick an emergency for special requirements.

Example: A modern windowless bank in Georgia was able to open for business as usual only because Koppers flew in a completed replacement coupling for its air conditioning unit. Elapsed time . . . request phoned to Baltimore after 10 in the evening . . . coupling arrived before 7:30 next morning.

KOPPERS COMPANY, INC., 707 Scott St., Baltimore 3, Maryland.

KOPPERS FAST'S COUPLINGS
Engineered Products Sold with Service

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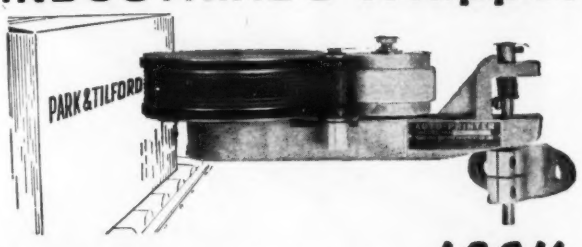
NO. 1 SPECIALIST IN THE MARKING FIELD
INDUSTRIAL'S Whippet



What Makes it First?... LOOK:

Versatility . . . automatically imprints cartons, bags, rolls, cans, containers and packages — as you need them during production line runs.
Low cost . . . "Whippet" sells low, seldom requires attention or maintenance.
Capacity . . . works non-stop at production lines speeds. No misses or overprints.
Simple Operation . . . attaches quickly and easily direct to conveyor line; non-oscillating friction head uses interchangeable rubber type for clear, legible impressions.
Saves . . . expensive hand stencilling, pre-printing, storage and inventory costs.

Proved practical and economical on almost any marking problem — in plants all over the country — "Whippet" is so simple, well designed and manufactured that experience proves they serve faithfully and profitably far beyond ordinary equipment. See how they can improve your operation.

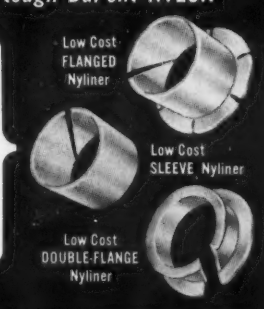
Write for details and catalog today! Dept. NED

ime INDUSTRIAL MARKING EQUIPMENT company, inc.
655 BERRIMAN ST. BROOKLYN 8, N.Y. NI 9-3305

▲ For more details circle NED-690 G1 on enclosed inquiry slip ▲

THOMSON "Snap-In" NYLINERS
—BEARINGS of smooth, tough DuPont NYLON

COST less to BUY
...less to INSTALL
ELIMINATE LUBRICATION!



Additional Benefits:

- CLOSE FIT
- LONGER LIFE
- EASILY INSTALLED
- LESS SERVICING
- SELF-RETAINING
- RESIST CORROSION
- LOW FRICTION
- RESIST POUNDOUT
- NO FRICTION OXIDATION
- DAMP VIBRATION
- OPERATE IN LIQUIDS
- NON-CONTAMINATING
- INSTANTLY REPLACEABLE
- RESIST ABRASION
- MINIMUM SPACE
- SILENT OPERATION
- LIGHTEST WEIGHT
- REDUCED WEAR

NYLINER Bearings are a highly engineered thin liner of DuPont Nylon, designed to bring bearing users the many benefits of Nylon as a bearing material by solving most of the limitations surrounding its use. The compensation gap principle assures maintenance of diametral tolerances for precision applications.

Seven Standard Types available from stock. Write for literature and name of your local representative who stocks NYLINER Bearings for immediate shipment.

THOMSON INDUSTRIES, Inc.
DEPT. 9, MANHASSET, NEW YORK

Also— Manufacturers of BALL BUSHINGS . . . the Ball Bearing for Linear Motions and 60 CASE Hardened & Ground Steel Shafting

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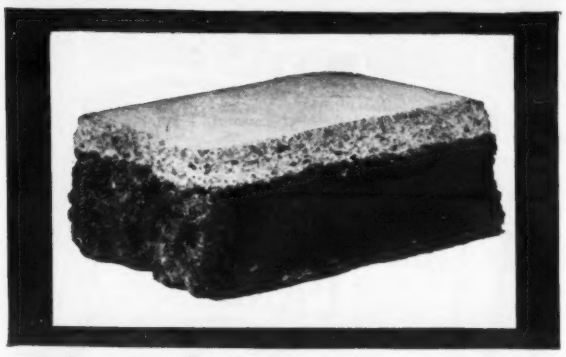

Now! BOND NEW CEMENT TO OLD!

Use new Tropical Cement Bond to *successfully* patch or re-surface broken concrete floors, steps, driveways, shipping docks. Repairs won't crumble, break or flake. Fracture tests show old-new bond undisturbed. Clean, brush on Cement Bond, lay new mix. Save high cost of breaking up old concrete! Withstands heavy traffic. *FREE.* Your letterhead request brings complete information—write today!

PARKER RUST PROOF PRODUCTS

TROPICAL PAINT COMPANY
1124-1230 W. 70th, Cleveland 2, O.
HEAVY-DUTY MAINTENANCE PAINTS SINCE 1883
SUBSIDIARY OF PARKER RUST PROOF COMPANY

▲ For more details circle NED-692 G1 on enclosed inquiry slip ▲

FREE!

TRACK INSPECTION KIT

Simplifies industrial siding maintenance. Contains easy-to-use check lists for track, tools, accessories; inspection report form showing and describing all siding elements; 16-page Maintenance Guide.

Write **L. B. FOSTER CO.** for Kit NE-7
Pittsburgh 30, New York 7, Chicago 4,
Houston 2, Los Angeles 5,
Atlanta 8, Cleveland 35

Faster From Foster
Rail • Piling • Pipe

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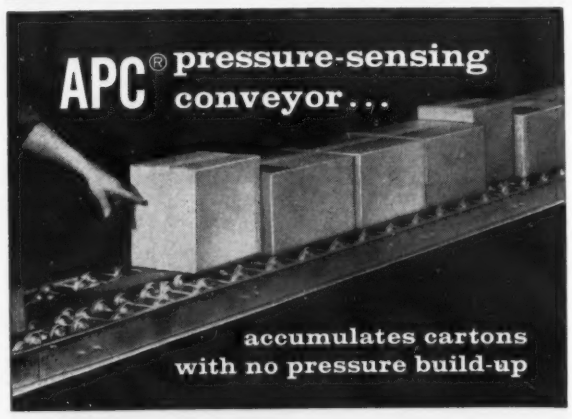

Rapistan APC (automatic pressure) conveyor reduces damaged cartons and contents be reducing line pressure to the practical minimum. In this photo, the conveyor belt is running, but forward pressure is so low that a finger's touch can stop the entire line. The new, safe way to accumulate goods under power in processing, warehousing and shipping operations.

Write for new Bulletin 1200 Illustrating APC Conveyor.

Rapistan conveying equipment

The RAPIDS-STANDARD CO., Inc.
604 Rapistan Building, Grand Rapids 2, Michigan

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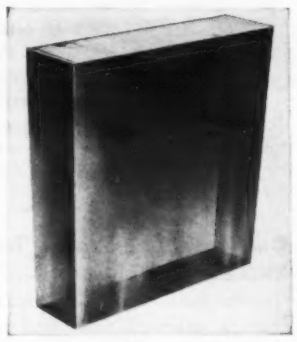
NEW MATERIALS AND PROCESSES

THERMOPLASTIC ROD & SLAB
machinable by conventional methods



Resistance to heat distortion and impact, toughness, and good heat stability are characteristics of Lexan, a transparent, light amber thermoplastic. It also has excellent dimensional stability and good electrical properties. Available as Zelux in normalized rod and slab form, it can be cut, drilled, tapped, milled, or machined in other ways by conventional methods to close tolerances. Sizes up to 72 x 12 x 3 in. are available. • **Westlake Plastics Co.**, Div. L, Lenni Mills, Pa.

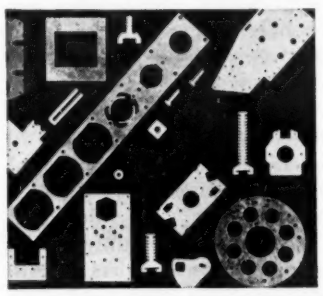
▲ For more details circle NED-695 G1 on enclosed inquiry slip ▲

ULTRA-THIN STAINLESS TUBING
seamless type has 0.0005-in. walls

Series 300 stainless steel tubing with walls only 0.0005 in. thick is now available in any specific outside diameter from 0.010 to 0.375 in. Tubing is redrawn to this ultra-thin wall thickness to tolerances as close as ±0.00005 in. It can be cut to exact lengths with ends concentric and burr-free. Ten miles of 0.375-in. tubing with 0.0005-in. wall weighs less than 1 lb. • **Uniform Tubes, Inc.**, Collegeville, Pa.

▲ For more details circle NED-696 G1 on enclosed inquiry slip ▲

ELECTRICAL INSULATION
heat-stable laminate can be punched



Properties of Grade TSA Class B electrical insulation available in flat sheet stock are retained during and after heat. Available in 1/16 to 5/8-in. thicknesses, the glass fiber reinforced polyester laminate can be punched or sheared cold without separating, cracking, or hole breakout. It retains 100 per cent of its impact strength after aging at 250° F and 75 per cent of perpendicular dielectric strength after 200 hr at 150° F. In addition to electrical insulation uses, it is suitable for use as wedges and top sticks in Class B rotating apparatus. Standard sheet sizes are 36 x 72 and 24 x 36 in. Thicknesses of 3/4 to 2 in. are also available. • **Glastic Corp.**, 4321 Glenridge Rd., Cleveland 21, Ohio.

▲ For more details circle NED-697 G1 on enclosed inquiry slip ▲

Rapistan PRESS-VEYORS

Call on Rapistan for the most efficient equipment to handle any type of mass-produced machine parts, forgings, stampings, light or heavy, any shape, any size, any temperature. Press-Veyors work at steep inclines in close quarters, easily portable, thoroughly dependable. Wide range of Press-Veyor sizes and belt materials. Ideal for press room work and many special problem applications. Magnetic models also available.

Write for illustrated reports of tough handling jobs solved by Rapistan Press-Veyors.

Rapistan conveying equipment

The RAPIDS-STANDARD CO., Inc.
605 Rapistan Building, Grand Rapids 2, Michigan

▲ For more details circle NED-698 G1 on enclosed inquiry slip ▲

air compressors

Kellogg-American compressors are engineered for **longer trouble-free life.** More delivered air power per kilowatt hour means lower operating cost. Warehouses and parts depots throughout the country for faster shipment and service. Complete size range—1/3 thru 20 H. P. Single and two-stage models.

The compressor is the HEART of your business. *Keep it ticking.*

WHAT ARE YOUR NEEDS? *For full details write to:*

Kellogg-American
DIVISION
SCAIFE COMPANY • PITTSBURGH 35, PA.

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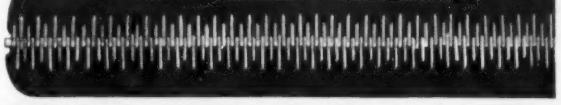
STITCHES OF STEEL
for greater flexibility



CLIPPER fasteners give versatility to flat belting

Clipper Stitches of Steel answer the engineer's dream of having an endless belt that always fits . . . that still can be installed without dismantling the machine. Clipper fasteners produce a belt joint so smooth and durable it operates well on both small and large diameter rollers. Here are some of the advantages:

- **Slashes belt installation and replacement time.**
- **Enables easy take-up of slack belts.**
- **Requires only a fraction of the time for vulcanizing.**
- **Smooth and durable as the belt itself.**
- **Withstands adverse operating conditions.**

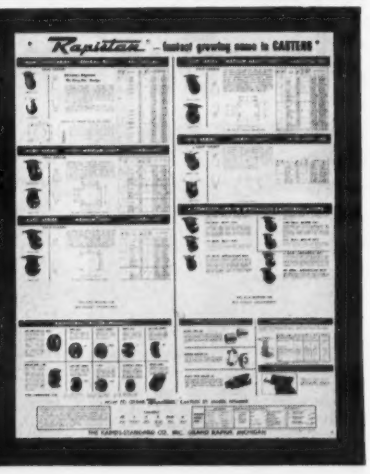
Send today for Clipper's "5-Company Report on Fastening Methods". Ask for Bulletin 259.

Ask your Industrial Distributor for Clipper Products

Clipper BELT LACER COMPANY
976 Front Ave., N. W., Grand Rapids, Michigan

▲ For more details circle NED-700 G1 on enclosed inquiry slip ▲

NEW WALL CHART



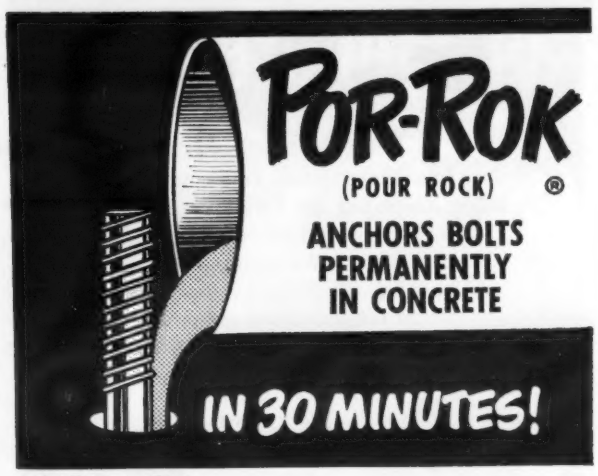
aids in caster selection

Take the guess work out of selecting casters and wheels. Write today for Rapistan's caster selection wall chart. Illustrates 5 standard industrial caster series including load limits, wheel characteristics, installation data, bolt hole spacings, and applications of hot forged and cold forged casters for all types of in-plant mobile equipment. Printed in color on durable and washable "fabric" type paper. No charge or obligation.

The RAPIDS-STANDARD CO., Inc.
614 Rapistan Bldg.
Grand Rapids 2, Michigan

Rapistan CASTERS AND WHEELS

▲ For more details circle NED-701 G1 on enclosed inquiry slip ▲



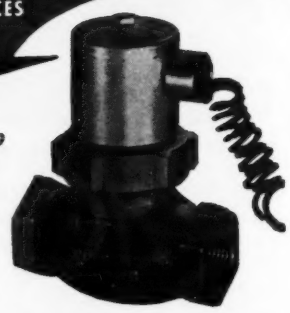
POR-ROK
1. Fastens anything into concrete—PERMANENTLY—in minutes
2. Lowest cost
3. Mixed with water and poured into place
4. Applied cold
5. Self-leveling, self-bonding, oil resistant, never shrinks
6. Compression strength 4,500 psi in 1 hour

For complete information—without obligation—write

THE HALLEMITE MFG. CO.
2452 WEST 25th ST. • CLEVELAND 13, OHIO SINCE 1927

▲ For more details circle NED-702 G1 on enclosed inquiry slip ▲

Check these prices on Gould Type M
Solenoid Valves
TYPICAL USER NET PRICES F. O. B. FACTORY



SIZE	1 to 5	100 to 499
½"	$15.40	$11.15
¾"	18.50	13.60
1"	24.25	18.50
1½"	48.00	42.40

2-Way • General Service
Packless • Normally Closed

Sizes ⅜" to 3" • Temperatures to 250° • Pressures to 400 psi • Molded epoxy resin water-proof coils • Unbreakable piston rings • No damaging hammer • Easy-off "O" ring bonnet construction in sizes ⅜" thru ¾" • High temp coils and explosion proof housings available. Immediate delivery. Ask for Bulletin 600-M.

SOME OTHER TYPES OF GOULD SOLENOID VALVES
D—Adjustable flow control, adjustable cushioning control to reduce shock, manual opening. **HV**—Four independent controls—opening, closing, flow, manual opening. **G**—Stainless, fractional ports, pressures to 1,000 psi. **GX**—All 316 stainless, fractional ports. **K**—Stainless, ½" to 2". **MDW**—Direct acting. NOTE: Special assemblies for exacting requirements.

J. D. GOULD CO. • 4707 MASSACHUSETTS AVE. • INDIANAPOLIS 18, IND.

GOULD SOLENOID VALVES VELVETROL

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New Design Manual

Stainless Steel Wire

Here's a brand new, 20 page manual giving design data on J&L Stainless Steel wire. With it, the design engineer can easily select the best stainless for the requirements of his specific applications.

Here are just a few of the subjects covered:
- MECHANICAL PROPERTIES
- LABORATORY CORROSION DATA
- APPLICATIONS
- STANDARD GAUGES

Send today for your free copy
WRITE TO DEPT. 1575
Jones & Laughlin Steel Corporation
STAINLESS AND STRIP DIVISION
Box 4606, Detroit 34, Michigan
STAINLESS SHEET • STRIP • BAR • WIRE

▲ For more details circle NED-704 G1 on enclosed inquiry slip ▲

NEW LITERATURE and CATALOGS

These catalogs have been selected on the basis of the completeness of their data and their value to the needs of our reader-audience. They are sent to you by the manufacturer or distributor when you circle the proper item number on a self-mailing inquiry slip in the issue. When a price is mentioned or a letter-head request is indicated, you should write to the company.

Conveyor & Elevator Takeups

FREE Link-Belt Co.—Seven frame styles and sleeve, ball, or roller bearings are available in the line of takeups described in 16-page illustrated Book 2741. Over 320 different units are covered. Units provide a positive means for adjusting head or foot shafts on conveyors or elevators.

▲ For more details circle NED-705 G1 on enclosed inquiry slip ▲

Semisteel Valves & Accessories

FREE Rockwell Mfg. Co., Nordstrom Valve Div.—Specifications for all sizes of straightway, steam jacketed, multiport, and special order Rockwell-Nordstrom semisteel valves are included in 44-page illustrated Bulletin V-203. Accessories described include wrenches, locking devices, extensions, lubricants, and the Hypregun for lubricating valves.

▲ For more details circle NED-706 G1 on enclosed inquiry slip ▲

Pre-Engineered Industrial Buildings

FREE Parkersburg Rig & Reel Co.—Available in clear-span widths from 32 to 120 ft and in unlimited lengths with the addition of 16 and 20-ft bays, the SF Series of pre-engineered metal buildings with eave heights of 10 to 20 ft are suited for industrial, commercial, and other applications. Full specs are given in 6-page Brochure BD-2602.

▲ For more details circle NED-707 G1 on enclosed inquiry slip ▲

Tool-Buying Handbook

FREE Porter-Cable Machine Co.—More than 70 portable electric tools designed for use in industrial production and maintenance operations are detailed in 36-page illustrated "Buying Guide." Also described are over 400 accessories which lend versatility to the heavy duty portable electric saws, sanders, drills, planes, routers, shapers, grinders, and other tools. All authorized service stations are listed.

▲ For more details circle NED-708 G1 on enclosed inquiry slip ▲

Urethane Hydraulic Seals & Packings

FREE Pellon Corp., Disogrin Industries Div.—Technical and application data on the various sizes, types, operating features, and advantages of solid urethane seals and packings for hydraulic applications are presented in 8-page bulletin. Operating temperatures for seals and packings can range from −40° to 275° F.

▲ For more details circle NED-709 G1 on enclosed inquiry slip ▲

Control, Monitoring, and Testing Equipment

FREE Meriam Instrument Co.—The unique services of this company in its Special Equipment Division are detailed in 6-page Brochure SED 100. Company can create equipment to simulate control or monitor transient, static, or dynamic conditions in a planned or random sequence to allow the operation or observance of performance characteristics of a product.

▲ For more details circle NED-710 G1 on enclosed inquiry slip ▲

Distribution & Power Transformers

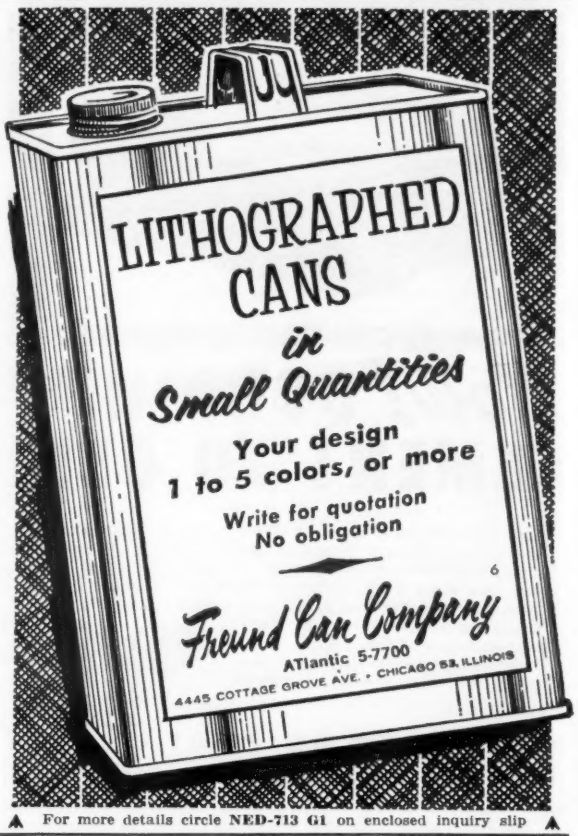
FREE Niagara Transformer Corp.—Reduced size, weight, and audible sound levels are major improvements incorporated in a new line of Class H ventilated dry type transformers described in 8-page Bulletin 162. Ratings range from 600 to 15,000 v and from 3 to 2000 kva.

▲ For more details circle NED-711 G1 on enclosed inquiry slip ▲

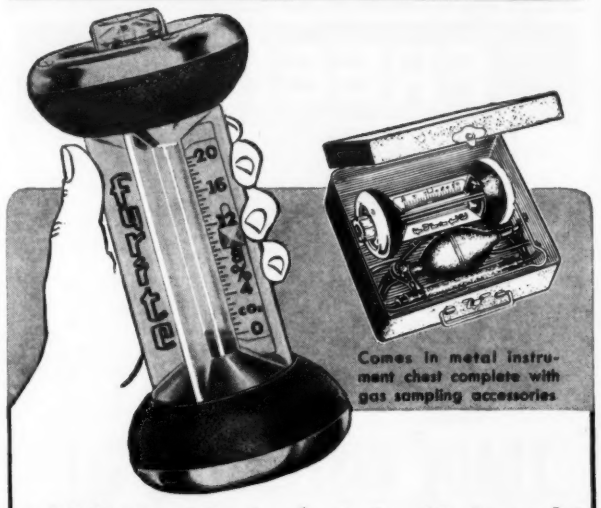
Hardboard Fabricated to Application

FREE Masonite Corp.—"Masonite Fabricators . . . how they can help you" is an 8-page broadside which explains the various fabricating processes performed in the Masonite Fabricators Division plants in Cincinnati, Ohio, Elizabeth, N. J., Thomasville, N. C., and Los Angeles. Properties and typical applications of various hardboards in manufactured products are discussed.

▲ For more details circle NED-712 G1 on enclosed inquiry slip ▲



▲ For more details circle NED-713 G1 on enclosed inquiry slip ▲



ACCURATE CO_2 Analysis in 40 Seconds!

Other outstanding features of the FYRITE CO_2 Indicator are its durable, fool-proof construction and unmatched convenience of operation. It requires no setting-up, has no valves or leveling bottle to manipulate.

The FYRITE measures CO_2 directly by the fundamental method of chemical absorption. Consequently, the reading is independent of voltage, humidity, temperature, or atmospheric pressure conditions.

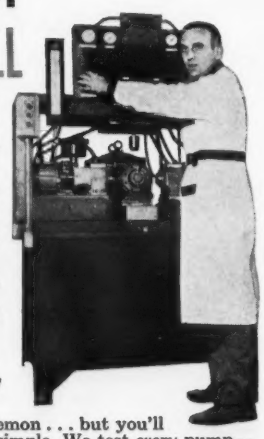
Comes complete with chemical charge good for at least 300 readings. Replacing chemical merely requires removing four screws that hold top assembly in place.

Write for Bulletin 805

BACHARACH Industrial Instrument Company
200 N. Braddock Ave. • Pittsburgh 8, Pa.

▲ For more details circle NED-714 G1 on enclosed inquiry slip ▲

NOT ALL BLACKMER PUMPS ARE PERFECT



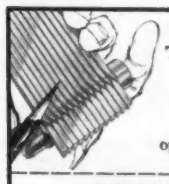
Just the ones you buy!

Now and then we build a lemon . . . but you'll never see it! The reason is simple. We test *every* pump—not just samples—but every pump before it leaves the plant. Test racks like this one are running constantly at Blackmer. In addition to countless checks and inspections made during production, each pump must pass this final rigid test of actual operation. Yes, we build some bad ones, but the man on the test rack gets the headache . . . not you.

Dependability has been the byword at Blackmer for more than fifty years . . . your promise of extra value in every Blackmer pump. Our whole line is cataloged in Bulletin One. Write for it today.

"liquid materials handling"® equipment
BLACKMER / *rotary pumps*
BLACKMER PUMP COMPANY, GRAND RAPIDS 9, MICHIGAN
Find your Blackmer Man under "Pumps" in the Yellow Pages

▲ For more details circle NED-715 G1 on enclosed inquiry slip ▲



TAPER-SLOT
from loop to loop, opening between wires increases to eliminate blinding of near opening size materials

WEDGE-WIRE
Kleenslot
PREPARATION SCREENS DESIGNED for VIBRATING or STATIONARY INSTALLATION
for dewatering, screening, washing, extracting, filtering or sizing applications

T-WEDGE
new concept in guard bar design—small screen efficiency—long guard bar life.

SCREEN GUARDS
screening surface protected from unnecessary abrasion

G187 and GB187 MIGH-TEE
special profile adds wearing surface for extended heavy-duty applications

F217 and F250
large size wire for extended life in abrasive applications

"S"
primarily designed to screen out flats and slivers

MARCEL
designed to screen out objectionable "slivers"

Wedge-Wire Kleenslot screens are custom manufactured for your application in almost any size, metal or finish and in special shapes not illustrated above.

send for free catalog

WEDGE-WIRE CORPORATION *Wellington, Ohio*

For more details circle NED-716 G1 on enclosed inquiry slip

A "Space-Age", Quik-Dry SPRAY LUBRICANT that Withstands 5000°

KGP-12B

Anti-friction • Anti-seizure • Anti-galling

KGP-12B—a pure synthetic graphite made from petroleum—is the most remarkable lubricating product ever created. Spray it on a surface to obtain a plating of lubrication that is slippery, safe in most applications up to 5000°, and will remain on the bearing or other surfaces virtually permanently. Will not wear or rub-off. Retards adhesion of hard carbons, wax, varnish to treated surfaces. Particularly useful where a wet or conventional lubricant may contaminate a product or is generally unsuitable, or where combustion hazard exists.

A suggestion of the hundreds of uses for KGP-12B:

Dry pre-lubricant for engines, bearings, etc. • Treatment for cutting tools, punches, drills to reduce friction, cut down wear, speed up operation. • Parting medium for molds, matrixes, dies, sand cores, etc. • Anti-seizure treatment for bolts, nuts, guide pins, etc. • Lubricate runners, slides. • Lubricate locks, hinges. • To retard oxidation.

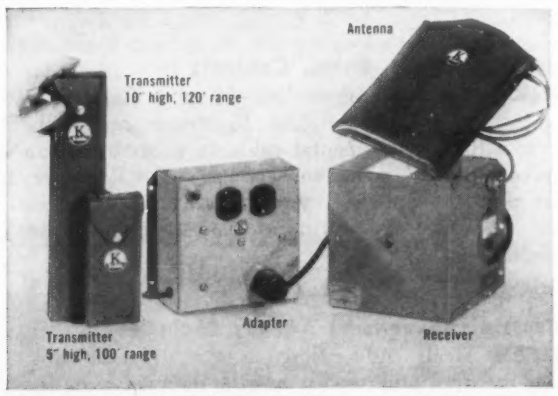
Write for full details and prices.

Available in drums for volume users.

Warehouse distributor and mill-supply house inquiries invited.

KING GRAPHITE PROD., INC.
21949 S. Telegraph • Trenton, Mich.

For more details circle NED-717 G1 on enclosed inquiry slip



Approved by the Burglary Protection Department of Underwriters' Laboratories

New portable alarm in a pocket-sized package!

Sounds alarms • Turns on lights • Closes doors • Reports hold-ups

Port-O-Larm uses a miniature, pocket-size radio transmitter to signal a fixed receiving unit whenever trouble strikes.

Ideal for use by bank tellers, sales personnel, plant guards or watchmen, the Kidde Port-O-Larm sends a pulsating radio signal to the receiver when the transmitter button is pressed. This causes an alarm to sound either locally, remotely, or at a central alarm station. For full information write Kidde today.

Kidde

Kidde Ultrasonic & Detection Alarms Division
724 Brighton Road, Clifton, N. J.
Walter Kidde & Company, Inc.

For more details circle NED-718 G1 on enclosed inquiry slip

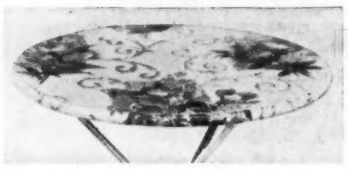
NEW MATERIALS AND PROCESSES

RED OXIDE PRIMER
stands up under severe weather

Deep, complete penetration of rusted and pitted metal surfaces, plus smooth all-weather flow for easy brushing are exhibited by Penetrol red oxide primer. Formulated with Penetrol oil, primer is exceptionally durable under severe weather conditions. It is furnished ready-mixed in quart, gallon, and 5-gal containers. • **Flood Co.,** Hudson, Ohio.

For more details circle NED-719 G1 on enclosed inquiry slip

VINYL-TO-METAL LAMINATES
can be drawn, punched, spot welded



Color, design, texture, and abrasion and chemical resistance are among advantages provided by Lifetex vinyl-to-metal laminates. Material consists of vinyl plastic sheeting permanently bonded to steel, aluminum, magnesium, or other metals. It can be rolled, drawn, cut, crimped, sheared, drilled, punched, stamped, riveted, or spot welded. Typical uses include bus and airline interiors, submarine bulkheading, truck body siding, radio and TV housings, patio and outdoor furniture, lightweight luggage, counter tops, kitchen ware, cabinets, wall and office partitions, and linings for chemical drums. • **Poloron Products, Inc.,** 165 Huguenot St., New Rochelle, N. Y.

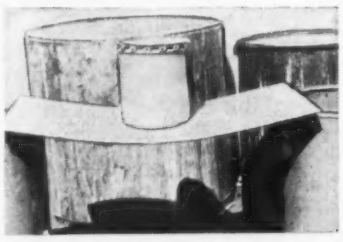
For more details circle NED-720 G1 on enclosed inquiry slip

WATERLESS HAND CLEANER
removes tar, grease, paint, ink

Lanolin and hexachlorophene contained in Little Doc Disolvit waterless hand cleaner keep the user's hands smooth and soft, even with repeated use. It has a pleasant odor and can be wiped off with paper towel if no water is available. Ink, tar, asphalt, grease, carbon, polishing grease, cement, paint, oil and other products are removed by the cleaner. It is offered in 4½-lb throw-away dispenser type containers. Introductory offer consists of two 4½-lb cans and a wall mounted $7.50 dispenser for $13.30. • **Schaffner Mfg. Co.,** Disolvit Div., Schaffner Center, Pittsburgh 2, Pa.

For more details circle NED-721 G1 on enclosed inquiry slip

EPOXY REPAIR CONCRETE
resists wear, impact, flexing



Epoxy resin is the binder in Flexcrete, a quick repair concrete which can be used as a grout, bonding agent, casting material, or resurfacer. It bonds to wood, concrete, steel, or almost any surface; is nondusting; resists wear, impact, chemicals, and water; and reportedly outwears concrete as much as 10 to 1. It can be applied in films as thin as ⅛ in., troweled to a feather edge, and will not crack unless substrate cracks. Flexcrete will cure overnight at 70° F temperatures and is ready for heavy traffic in 48 to 72 hr. In photo, a 2 x 4-ft Flexboard with ⅛-in. Flexcrete coating on the underside is severely flexed under the weight of a pail of sand. Coating withstands the stress. • **Shield Chemical Corp.,** 251 Grove Ave., Verona, N. J.

For more details circle NED-722 G1 on enclosed inquiry slip

SERVIS RECORDERS

Installed on 17 Lift Trucks

SAVED $40,000 A YEAR

Everybody Was Happy!

WORKERS no longer complained about discrepancies in pay checks — they knew the Servis Recorder work-record was right!

OTHER OPERATING DEPTS. received several of the lift trucks no longer needed on their previous assignments due to the new efficiency.

THE DEPT. SUPERVISOR received a cash award for efficiency!

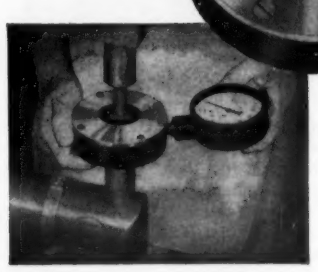
MANAGEMENT . . . well, $40,000 savings ain't hay! Management thinks Servis Recorders are wonderful — in fact they have bought 30 more! (Name of this company furnished on request.)

YOU can profit by installing Servis Recorders, too. The cost is low! Write for illustrated literature today!

THE SERVICE RECORDER CO. 1013A Rockwell Ave. CLEVELAND 14, OHIO

For more details circle NED-723 G1 on enclosed inquiry slip

Webster DIRECT READING
HYDRAULIC TYPE
FORCE GAUGES



Measures electrode pressure on spot welders and roll welders. Makes compressive tests on forming, dimpling and upsetting operations. Also useful for weighing. Insulated contact surface prevents damage if welder is accidently fired. Easy setups, no delicate mechanisms, 5 ranges: 0-1000, 6000, 10,000, 20,000, 40,000 lbs. 3½" diameter gauge with accuracy to 1%. Reads directly in pounds—no conversion scales. Write for details.

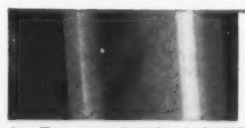
Webster INSTRUMENT, INC.
Dept. N, 11856 Mississippi Ave., Los Angeles 25, California

For more details circle NED-724 G1 on enclosed inquiry slip

NEED ALUMINUM TUBE OR PIPE?

WRITE

WOLVERINE TUBE
DIVISION OF
Calumet & Hecla, Inc.
DEPT. O, 17272 SOUTHFIELD RD., ALLEN PARK, MICH.
TUBEMANSHIP in Copper—Copper Alloys—Aluminum—Special Metals



For more details circle NED-725 G1 on enclosed inquiry slip

Wiped film evaporator handles tough jobs

If you evaporate products that are *heat sensitive, highly viscous,* or *low in thermal conductivity,* take a look at the Pfaudler Wiped Film Evaporator.

Key to its efficiency is the *mechanically wiped* evaporating surface that works like this: Centrifugal force of an internal rotor (pictured above) holds four free-floating wipers in contact with the heated wall. These wipers spread your product over the entire surface in a *thin, uniform film.* Slots in each wiper prevent product "curl" and accelerate it down and off the wall—very important with viscous and heat-sensitive materials.

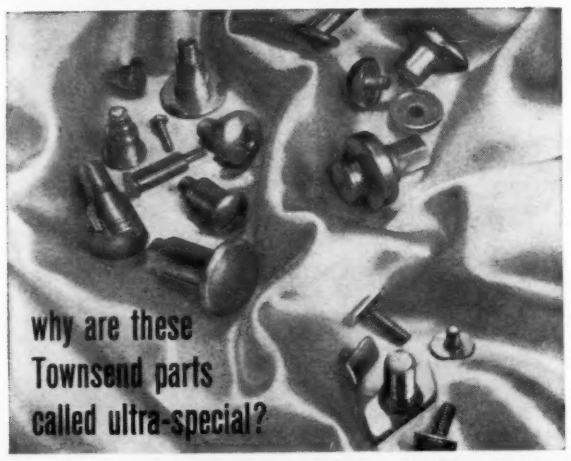
Wiping also assures complete wetting of wall—no channelling—no hot spots—optimum efficiency for full utilization of heat-transfer area.

TEST YOUR PRODUCT IN OUR LAB. Then, choose the proper size production unit.

MORE DETAILS by writing to our Pfaudler Division, Dept. NED-71, Rochester 3, N. Y.

PFAUDLER PERMUTIT INC.
Specialists in FLUIDICS . . . the science of fluid processes

▲ For more details circle NED-726 G1 on enclosed inquiry slip ▲



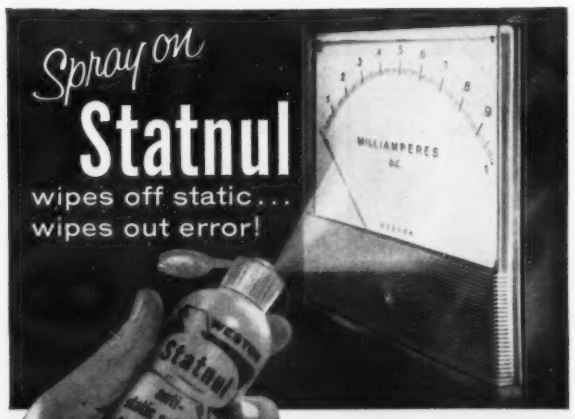
We call the metal parts shown here Ultra-Special because they are the result of completely new cold-forming and finishing techniques. They are typical examples of how users are reducing costs by taking advantage of the strength, improved quality, close dimensions and economy of mass-producing parts by cold-forming.

Now, through extensive research and development work Townsend is cold-forming Ultra-Special items with intricate shapes and critical dimensions held to tolerances as close as .001 inch. They may be made by combining cold-heading processes with impact extrusions, special heat-treatment and coatings, to name but one of the new techniques.

The use of Townsend Ultra-Special items in your product assembly could provide the means to make better products at lower costs. Investigate by asking a Townsend field engineer to call. **Write Townsend Company, Engineered Fasteners Division, P. O. Box 71-G, Ellwood City, Pa.**

In Canada: Parmenter-Bulloch Manufacturing Co., Limited, Gananoque, Ontario

▲ For more details circle NED-727 G1 on enclosed inquiry slip ▲



Static electricity can cause false readings in panel and test instruments . . . especially with plastic-faced meters. Eliminate this problem for months with new Weston STATNUL. *Spray or apply* with saturated cloth—then wipe. An invisible shield drains away static. *Cleans and polishes* with every application . . . wards off abrasive dust.

Mail coupon today or see your Weston distributor.
Only $3.95! Check or money order enclosed ☐
Bill me. Purchase order enclosed ☐

Name_____
Address_____
City_____ Zone____ State____

WESTON Statnul a product of DAYSTROM, INCORPORATED
Weston Instruments Division, Dept. NE7, Newark 12, N. J.

▲ For more details circle NED-728 G1 on enclosed inquiry slip ▲

NEW LITERATURE and CATALOGS

Motors, Generators & Controls

FREE Fairbanks, Morse & Co., Electrical Div.—48-page "Catechism of Electrical Machinery" presents important theoretical and practical features of common types of direct and alternating current motors, generators, and control equipment.

▲ For more details circle NED-729 G1 on enclosed inquiry slip ▲

Hardfacing Electrodes & Wires

FREE Air Reduction Sales Co.—Wear protection provided on industrial and construction equipment by Airco hardfacing alloys is discussed in detail in 44-page illustrated Brochure ADC 955. A cross-referenced pictorial layout covers many hardfacing electrodes and wires, classifying them by use. Listed are over 100 equipment parts that benefit from hard facing.

▲ For more details circle NED-730 G1 on enclosed inquiry slip ▲

Laminated Glass for Safety Glazing

FREE Monsanto Chemical Co., Plastics Div.—Casualties caused by flying glass are eliminated by use of laminated architectural glass for glazing hazardous industrial areas. Four-page Bulletin 3001 describes situations that justify use of the glass, made with a Saflex polyvinyl butyral inter layer.

▲ For more details circle NED-731 G1 on enclosed inquiry slip ▲

Precision Lap Grinding

FREE Speedlap Corp. — Water cooling, built-in parts handling system, and geared flatness control are features of Speedlap precision lap grinding equipment, described in 8-page illustrated Bulletin S-161. Intended for obtaining flatness, surface finish, and size, the equipment is made in several models which take diameters up to 32 in.

▲ For more details circle NED-732 G1 on enclosed inquiry slip ▲

Linear Accelerator

FREE Tayco Development, Inc. — Controlled acceleration, velocity, and deceleration are possible with the Tayco linear accelerator, subject of 16-page illustrated Brochure A. Various applications are described. Typical unit accelerates a test part up to 105 mph in 7 in., maintains velocity for 25.5 in. of stroke, then decelerates to zero in 8.5 in. It develops 760 hp in a 1½-in. OD piston.

▲ For more details circle NED-733 G1 on enclosed inquiry slip ▲

Surface Mounted Fluorescent Fixtures

FREE Globe Illumination Co.—Contempo series of surface mounted fluorescent lighting fixtures and ten diffusing elements is only 3¼ in. thick. As described in well-illustrated Brochure A-6, they are available in squares and rectangles with a wide choice of light control media. Comprehensive technical data are included.

▲ For more details circle NED-734 G1 on enclosed inquiry slip ▲

Tape & Label Applications

FREE Topflight Corp.—Nine specific pressure sensitive tape and label problems as diverse as cows, tires, and bock beer are discussed in 12-page Bulletin TB-61-15M. Adhesives, backing stock, and laminations are available for a wide variety of needs, and will withstand weathering, moisture, heat, cold, electricity, and abrasion. Two-page planning guide lists 14 labeling materials and 21 tapes and their properties and uses.

▲ For more details circle NED-735 G1 on enclosed inquiry slip ▲

High Vacuum Valves, Baffles & Traps

FREE Consolidated Vacuum Corp.—Design data, methods of operation, and specifications for high vacuum gate, right angle, ball, and globe valves and combination valve and baffle are among contents of 28-page illustrated Bulletin 28-A. Also described are chevron-shaped ring, multicoolant, water cooled, and nitrogen cooled baffles, and various forms of traps and adapters.

▲ For more details circle NED-736 G1 on enclosed inquiry slip ▲

Mixing, Handling & Dispensing Resins

FREE H. V. Hardman Co.—Specifications of 20 basic models of the Triplematic pump and the variations available for each model comprise 10-page guidebook. These pumps proportion, mix, and dispense two and three part multicompartment resins with low or high viscosities in metered shots or continuous flow. Answers are given to a series of questions about dermatitis, bubbly mixtures, improper ratios, excessive waste of short-pot-life materials, etc.

▲ For more details circle NED-737 G1 on enclosed inquiry slip ▲

Leasing New & Used Equipment

FREE United States Leasing Corp.—Tax timing benefits, conservation of capital and credit, balance sheet effect, cash flow improvement, and conservation of capital and credit are among subjects covered in illustrated 16-page bulletin. "The Engineered Equipment Lease." Facts cover leasing of new and used equipment.

▲ For more details circle NED-738 G1 on enclosed inquiry slip ▲

Standard Glass Fiber Cases

FREE Skydyne, Inc.—Twenty-two standard sizes are available in line of portable, lightweight cases for protecting delicate optical, electrical, and electronic equipment. They are made of glass fiber reinforced polyester resin in any color. Framework and hardware are aluminum, according to descriptive, illustrated 16-page bulletin.

▲ For more details circle NED-739 G1 on enclosed inquiry slip ▲

Factory Color Planning

Actual paint swatches and recommended color schemes for all areas of a factory are contained in this 16-page color planning book. Color schemes are by Howard Ketcham, a leading color authority. Book is available at 65 cents per copy only by writing on company letterhead to O'Brien Corp., 2001 W. Washington Ave., South Bend 21, Ind.

▲ For more details circle NED-740 G1 on enclosed inquiry slip ▲

Phosphor & Photocathode Characteristics

FREE ITT Federal Laboratories, Components & Instrumentation Laboratory—One side of this slide rule type chart of phosphor and photocathode characteristics covers 23 different phosphors and the other side details 14 common cathode materials. Simple setting of the slide is all that is needed to determine which material to use.

▲ For more details circle NED-741 G1 on enclosed inquiry slip ▲

DC Power Supplies

FREE Kepco, Inc.—Data on over 150 standard models of regulated direct-current power supplies are found in 32-page illustrated Catalog B-611. Semiconductor, vacuum tube, magnetic, and hybrid designs are covered. Programmable current/voltage regulated models are listed separately.

▲ For more details circle NED-742 G1 on enclosed inquiry slip ▲

High Pressure Hose Assemblies

FREE Resistoflex Corp.—Design details for Fluoroflex-T hose assemblies for service from −67 to 450° F and ranging from 3000-psi heavy duty impulse service to 6000-psi limited surge service are presented in 8-page illustrated Catalog HP-2. Specifications for assemblies for pneumatic and hydraulic service are given.

▲ For more details circle NED-743 G1 on enclosed inquiry slip ▲

Screw Machine Products

FREE Merit Specialties Co.—Illustrated in 4-page folder are 66 screw machine parts made in one or more operations and over 45 parts completed in one operation on this company's machines. Its products and services are listed.

▲ For more details circle NED-744 G1 on enclosed inquiry slip ▲

Ovens, Furnaces, Baths, Cabinets

FREE Blue M Electric Co.—240-page Catalog 161 is a complete guide to Blue M electric ovens, furnaces, baths, environmental cabinets, related temperature control equipment, and accessories for laboratory, pilot plant, research and development, and production uses. Complete engineering and selection guidance is included.

▲ For more details circle NED-745 G1 on enclosed inquiry slip ▲

Industrial Advertising Agency Facilities

FREE Healy Advertising Agency—16-page illustrated product and service brochure shows copy, art, production, and creative capabilities of this industrial advertising agency. Successful advertising and promotion campaigns of this progressive Montclair, N. J. agency are covered.

▲ For more details circle NED-746 G1 on enclosed inquiry slip ▲

Q's and A's on Compressor Valves

FREE Ingersoll-Rand Co.—Heart of the reciprocating air compressor is its valving which opens and closes up to 60,000 times per hour. Its operation and importance are stressed in a 44-page illustrated booklet, "Questions & Answers About Valving." Section is devoted to procedures and equipment used in making these valves, including the Channel valve. Cartoons and cut-away drawings show valve components and mechanics.

▲ For more details circle NED-747 G1 on enclosed inquiry slip ▲

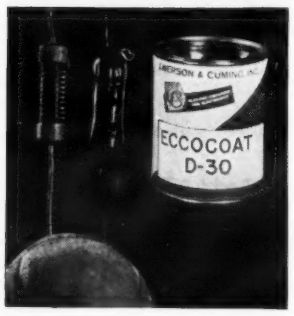
NEW MATERIALS AND PROCESSES

RUST PENETRANT
loosens frozen bolts, connections

Rust-frozen bolts, screws, shafts, piping, connections, and assemblies are quickly loosened by application of Rust Buster, a rust penetrant offered in a plastic squeeze bottle. Also offered is an extending spout for placing the liquid exactly where desired. Penetrant is harmless to skin, clothes, and metal, and contains no harmful ingredients. • **Armite Laboratories,** 6609 Broad St., Los Angeles 1, Calif.

▲ For more details circle **NED-748 G1** on enclosed inquiry slip ▲

EPOXY RESIN DIP COATING
has high moisture resistance

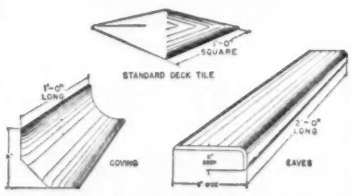


When preheated parts are dipped into Eccocoat D30, the epoxy resin dip coating compound gels on the surface of the part. It will not run or drip during the oven cure cycle and provides a strongly adhesive surface coat with high mositure resistance on transformers, capacitors, and similar components. Amount of pick-up is controlled by the preheat temperature and immersion time. Flexibility of the cured resin imparts thermal and mechanical shock resistance. Usual color is black, but other colors are available. Price is $1.45 per pound in a 1-gal can of 8 lb or $1.30 per pound in a 55-gal drum. • **Emerson & Cuming, Inc.,** 869 Washington St., Canton, Mass.

▲ For more details circle **NED-749 G1** on enclosed inquiry slip ▲

ASBESTOS-CEMENT TILE
makes roof surfaces serviceable

Built-up roofing surfaces, unusable for heavy foot traffic, are made into serviceable areas by the installation of Promenade asbestos-cement tile. It protects the roof surface from damage incurred in foot traffic and, in addition, keeps the felt of the built-up roof from deteriorating in the sunlight. Reflective light gray color minimizes heat absorption. Tile is installed on a trowelled-on cold asphalt cement base. It can be cut with a hack saw or scored for breaking, and is easily fitted around irregular shapes and projections. Standard 12 x 12 x 5/16-in. tile weighs 3.4 lb. Coving and eaves sections measuring 12 x 6 x 6 in. and 24 x 6 x 2 in., respectively, are also available. • **Keasbey & Mattison Co.,** Butler Avenue, Ambler, Pa.



▲ For more details circle **NED-750 G1** on enclosed inquiry slip ▲

ANTISKID FLOOR COATING
for safe footing on stairs, ramps

Potentially slippery stair treads, ramps, and floors are made more safe with Tuf-Quik Skid-Grip industrial floor coating. It is ready-mixed for application over wood, concrete, and metal, either painted or bare, indoors or outdoors. It provides a nonsparking surface, 85 to 90 per cent coefficient of friction on wet or oily surfaces, and chemical resistance to spilled fuels, lubricating oils, fats, grease, and other industrial compounds. Coating is available in light and slate gray, tile red, and green colors and dries overnight. • **Wilbur & Williams Co.,** 650 Pleasant St., Norwood, Mass.

▲ For more details circle **NED-751 G1** on enclosed inquiry slip ▲

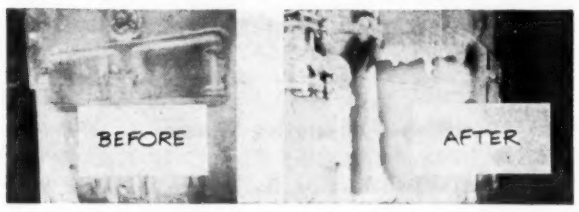
GALVANIZED METAL ETCH
assures lasting paint protection

Galvanized, galvannealed, zinc treated, and cadmium plated metal surfaces are cleaned and etched by Galva Etch preparatory to painting. This treatment provides a good "anchor" for paint and extends its life by preventing paint from flaking or peeling. It is merely wiped or brushed on the surface, allowed to work for a few seconds, rinsed, and wiped dry. It is diluted with water, and is available in 1-gal plastic jugs or 1-qt glass bottles. • **Martin-Senour Co.,** 2500 S. Senour Ave., Chicago, Ill.

▲ For more details circle **NED-752 G1** on enclosed inquiry slip ▲

SEALING COMPOUND
metallic type for water, gas, steam

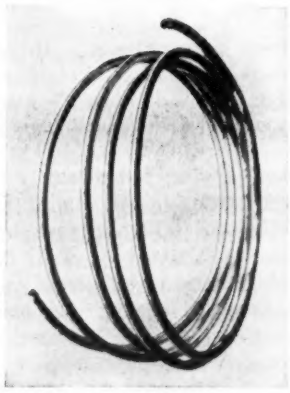
Sealing of leaks in hot water heating plants, hot water tanks, radiators, pipes, gaskets, and engine blocks is possible with Re-Seal metallic sealing compound.



Made with copper, bronze, and lead, it effectively seals water, gas, and steam leaks. It is added to water in tank or system, or it is mixed with water and applied as a paste. Product is available in plastic tubes, 1-lb cans, and 5 and 10-lb drums. • **Reardon Products,** 305 Cass St., Peoria, Ill.

▲ For more details circle **NED-753 G1** on enclosed inquiry slip ▲

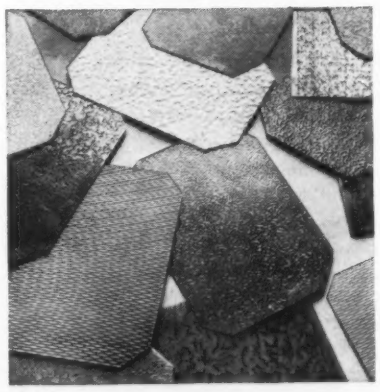
TEFLON INSULATING TUBING
spiral wrapped for flexibility



Increased flexibility and strength is embodied in Penntube 1-SW electrical insulating tubing by making it from spiral wrapped Teflon tape. Tubing exhibits high burst pressure and resistance to ripping or cracking. It is available with 0.008 to 0.012-in. walls in No. 26 to 10 sizes and with 0.010 to 0.014-in. walls in No. 9 to 7 sizes. Available in solid colors, tubing has service range from −90 to 250° F, a 2.0 dielectric constant, and dissipation factor of 0.0002. It remains flexible at low temperatures. • **Pennsylvania Fluorocarbon Co.,** 1115 N. 38th St., Philadelphia 4, Pa.

▲ For more details circle **NED-754 G1** on enclosed inquiry slip ▲

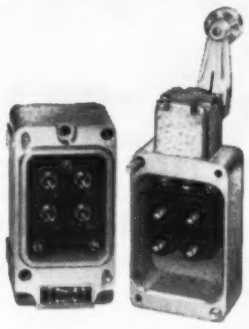
COLORED ELECTROPLATED FINISHES
are decorative on textured metals



Novel multicolor electroplated finishes are achieved on textured metal surfaces by buffing to remove the top coat from raised areas. This displays and accents underlying metal against a background of the electroplated deposit. A typical example is textured steel, zinc plated and dyed using chromate conversion coatings. Buffing causes the bright zinc to stand out in relief from the coating in the recesses. Many design effects can be achieved by varying the basis metal, the electroplating process, and/or the texturing method. Appliances, business machines, and auto interiors and trim are among potential applications. • **Metal & Thermit Corp.,** Plating Div., Rahway, N. J.

▲ For more details circle **NED-755 G1** on enclosed inquiry slip ▲

MICRO SWITCH Precision Switches



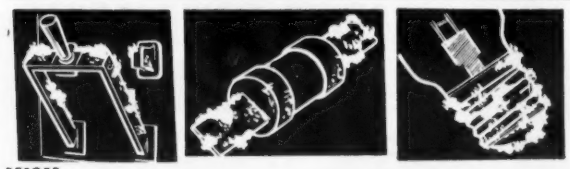
"PLUG-IN LIMIT" SWITCHES SAVE COSTLY DOWNTIME WITH 20-SECOND REPLACEMENT

MICRO SWITCH oiltight "Plug-in Limit" switches save hundreds of dollars in replacement time with their easy 20-second replacement. Four sturdy spring plugs fit receptacles in the terminal block quickly and securely! The "Plug-in Limit" switch has oiltight seals, rugged actuator and long-life snap-action switching element. Actuator heads adjust to different positions. May be mounted from side or back. Nine standard and many special actuator designs are available. Contact arrangement is two-circuit double-break. See the Yellow Pages for the MICRO SWITCH distributor or write for Catalog 84.

MICRO SWITCH . . . FREEPORT, ILLINOIS . . . A division of Honeywell
In Canada: Honeywell Controls, Limited, Toronto 17, Ontario

Honeywell
MICRO SWITCH Precision Switches

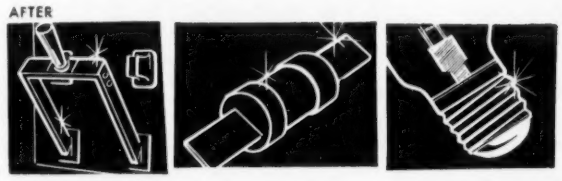
▲ For more details circle **NED-756 G1** on enclosed inquiry slip ▲



BEFORE

SILICONE COMPOUND KEEPS CONTACTS CORROSION-FREE!

AFTER



Dow Corning SILICONE COMPOUNDS cut your upkeep chores. Just a small dab from a handy applicator tube keeps lamp bulb bases, fuse cartridge clips, switch blades and clips . . . wiping contacts on any devices . . . corrosion-free.

Long-life silicone compounds prevent corrosion . . . eliminate shorts, grounds and arcs . . . protect and lubricate plastics, leather, rubber and fabrics. Serviceable from —40 to 400 F!

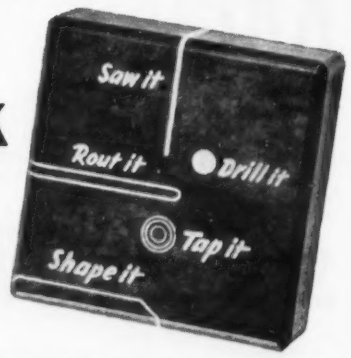
FREE SAMPLE and information. Write today. Dept. A819.

first in silicones **Dow Corning CORPORATION** MIDLAND, MICHIGAN

▲ For more details circle **NED-757 G1** on enclosed inquiry slip ▲

what can you do with this

FREE BLOCK of BENELEX?



You can saw it, rout it, drill it, tap it, shape it. It's light—one-sixth the weight of steel. It's workable—machines any way you please. It's genuine Masonite hardboard. Watch this high-density laminate take the $ out of production costs. What *can't* you do with Benelex? Find out for yourself; write today for your free sample. We'll send you a free booklet, too, filled with specifications and suggestions for use. Write to Masonite Corporation, Dept. NED-7, Box 777, Chicago 90, Ill.

MASONITE *shows the way*

®Masonite Corporation—manufacturer of quality panel products for building and industry
Masonite and Benelex are registered trade-marks of Masonite Corporation

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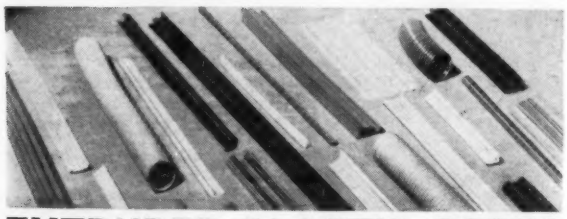
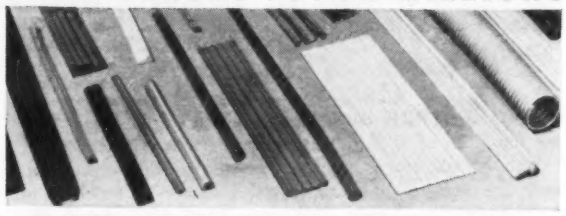


EXTRUDED PLASTIC PARTS
BY HUNDREDS . . . OR MILLIONS



WE MATCH YOUR SPECS AND YOUR PRODUCTION SCHEDULES

We can produce in quantity any part made of extruded flexible vinyl plastic (illustrated) or of molded solid rubber. We have complete engineering and technical personnel for working with you on developing the design or redesigning a part, plus a long and successful performance record on quality and deliveries to schedule. Send drawing, sketch or part for prompt quote. Ask for illustrated folder.

REPUBLIC RUBBER DIVISION
LEE RUBBER & TIRE CORPORATION, YOUNGSTOWN 1, OHIO
INDUSTRIAL RUBBER PRODUCTS

For more details circle NED-759 G1 on enclosed inquiry slip

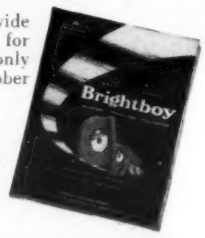
BRING DOWN COSTS
with this TIME-SAVING
4-in-1 OPERATION
Simultaneous
BURRING • CLEANING
FINISHING • POLISHING
TIME SAVINGS UP TO 50%

The exceptional abrasive-and-rubber working action of multi-use Brightboy will shed a revealing light for you on substantial cost savings! Brings you a wide, refreshing concept of applications, some never before associated with abrasive uses. Bridges the gap between the grind and buff in ONE OPERATION. The finish frequently constitutes the polish. Replaces various older methods for working:

All Metals • Wood • Glass • Fiberglass • Laminated Materials • Some Plastics

Immediate delivery JOB-MATCHED STOCK TEXTURES SPECIALLY SUITED TO YOUR REQUIREMENTS

Wheels, sticks, rods, block and points in wide range of rubber binders, soft to tough, for machine and manual operations. The only complete, comprehensive line of soft rubber bonded abrasives.



TELL US WHERE YOU WANT TO SAVE. WE PROBABLY CAN ADVISE YOU HOW. Write for the cost-saving Brightboy Catalog-Manual covering:
• Methods and Applications • Machine Speeds
• Job-Matched Stock Numbers • Wheel Sizes—Complete Range

WELDON ROBERTS Brightboy RUBBER CUSHIONED ABRASIVES

BRIGHTBOY INDUSTRIAL DIVISION
WELDON ROBERTS RUBBER CO.
95 North 13th St., Newark 7, N. J.
America's Pioneer Manufacturer of Rubber-Bonded Abrasives

For more details circle NED-760 G1 on enclosed inquiry slip

Knives, our business since 1875. . .

Isaac Perkins Hyde, a one-man operator, produced the first Hyde leather and shoe knives which he delivered by buggy to factories in New England. From this humble beginning, Hyde has expanded and diversified its knife production facilities and distribution many times over. Today, Hyde is one of the world's largest and best known manufacturers of knives for industry and Fix-Up, Paint-Up Tools for plant maintenance. You can be sure of time tested quality when you specify Hyde.

HYDE

For more details circle NED-761 G1 on enclosed inquiry slip

NEW LITERATURE and CATALOGS

Typical Cold Headed Specialties

FREE John Hassall, Inc.—16 pages of vest pocket-sized booklet "Cold Head for Happy Hearts" familiarize its readers with the many types of parts being cold headed by this company. Sketches and descriptions of typical cold headed specialties are included.

For more details circle NED-762 G1 on enclosed inquiry slip

Carbon & Alloy Steel Tubing Data

FREE Joseph T. Ryerson & Son, Inc.—Characteristics, size range, and relative cost of carbon and alloy steel tubing for mechanical, structural, and hydraulic applications are found in 4-page revised Bulletin 12-10. Stainless steel, aluminum, and plastic tubing are also covered, along with tips on using tubing instead of bar stock.

For more details circle NED-763 G1 on enclosed inquiry slip

Thermoplastic Processing Equipment

FREE Modern Plastic Machinery Corp.—Extruders with diameters from 1 to 12 in., chill roll casting equipment, blow molding equipment, monofilament lines, blown film take-up machines, and various special equipment are subject of 16-page illustrated catalog. Functions and operating features of the thermoplastic processing equipment are covered.

For more details circle NED-764 G1 on enclosed inquiry slip

Heat Absorbing & Insulating Glasses

FREE Libbey-Owens-Ford Glass Co.—Direct or reflected sun rays that cause body discomfort and increase air conditioning costs are minimized as a problem through use of Parallel-O-Grey and heat absorbing plate glasses and Thermopane insulating glass. Sections of 6-page illustrated AIA File No. 26-A-9 deal with uses, installation, maximum sizes, and specifications.

For more details circle NED-765 G1 on enclosed inquiry slip

Hardboard—From Forest to End Use

FREE American Hardboard Association—Step-by-step processes in the manufacture of hardboard, a man-made building material made of tiny wood fibers, are described and illustrated in 16-page booklet, "The Story of Hardboard." Its properties, the various types available, and some of its many applications are covered.

For more details circle NED-766 G1 on enclosed inquiry slip

Antiscoring Lubricant

FREE Chicago Mfg. & Distributing Co.—Ability to withstand 20-ton per sq in. pressure without breakdown is claimed for CMD extreme pressure antiscoring lubricant. It prevents metal-to-metal contact and consequent scoring and galling. Its use on centers, bearings, extruding, broaching, cams, and tapping is covered in 4-page folder.

For more details circle NED-767 G1 on enclosed inquiry slip

Motor Application Guide

FREE Century Electric Co.—Broad line of single and three-phase and direct current motors, plus gearmotors and selective speed drives are detailed in 16-page 1961 Motor Application Guide 010. Two motor selection charts match motor characteristics to specific applications. Rating and dimension tables are included.

For more details circle NED-768 G1 on enclosed inquiry slip

Industry Standards for Alumina Ceramics

Prepared by an Industry Technical Committee, 16-page "Standards of the Alumina Ceramic Manufacturers Association" provides basic information on the production, design, and effective use of ceramic materials and parts. Special sections deal with test methods, design fundamentals, resistance to nuclear radiation, and quality assurance standards. Price is $1. Published by the **Alumina Ceramic Manufacturers Association**, 53 Park Pl., New York 7, N. Y.

For more details circle NED-769 G1 on enclosed inquiry slip

Review of Metal Literature

Twenty sections of the "ASM Review of Metal Literature, 1960" cover different areas of materials and process engineering and technology. It contains 11,903 annotations of articles, technical papers, reports, and documents appearing in engineering, scientific, and industrial journals throughout the world in 1960. The 1342-page, 6 x 9-in. book sells for $25 and is available from **American Society for Metals**, Metals Park, Novelty, Ohio.

For more details circle NED-770 G1 on enclosed inquiry slip

MOTOR PROBLEM ?

"PERSONALIZED" MOTORS
FOR YOUR NEW PRODUCT
Planned, Designed and Manufactured
by Lamb Electric

Years of experience in creating fractional horsepower motors for exacting product requirements means you get the RIGHT MOTOR, mass-produced at the most favorable cost.

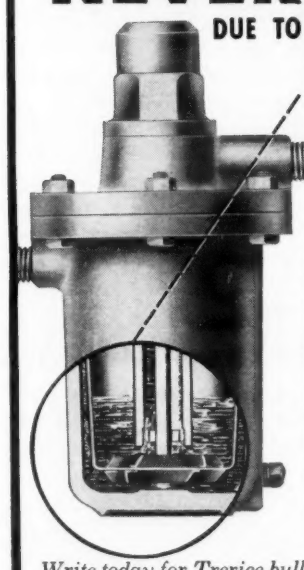
FREE! Write today for descriptive folder, and information on how you can set up a "Motor Conference".

THE LAMB ELECTRIC COMPANY • KENT, OHIO
A Division of American Machine and Metals, Inc.
In Canada: Lamb Electric — Division of Sangamo Company Ltd.—Leaside, Ontario

Lamb Electric
SPECIAL APPLICATION FRACTIONAL HORSEPOWER MOTORS

For more details circle NED-771 G1 on enclosed inquiry slip

TRERICE Steam Traps
NEVER LEAK
DUE TO WIRE-DRAWING!



Patented Propeller Rotates Stainless Steel Valve—Assures Long Life

Action of the exclusive rotating valve in Trerice steam traps puts an end to steam leakage problems! With every discharge the valve rotates and seats in a new steam-tight position—wire drawing is eliminated!

LONG LIFE Stainless steel bucket, valve stem and propellers are assembled as one unit—only one moving part in the trap. Guaranteed long-life service.

EASY, LOW-COST MAINTENANCE Trerice steam traps can be inspected easily, quickly, right on the line! No need to disturb high pressure bolts and gaskets. You save all ways—on fuel, labor and downtime!

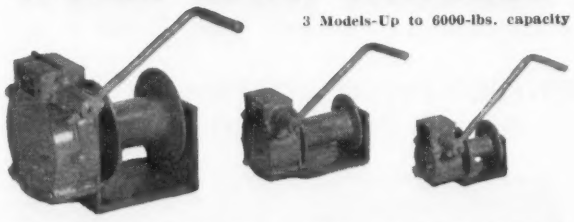
Write today for Trerice bulletin 1400M containing data on the Trerice rotating valve steam trap

H.O. TRERICE CO. 1420-C W. Lafayette Blvd. Detroit 16, Michigan

For more details circle NED-772 G1 on enclosed inquiry slip

Announcing New Thern
"AUTO LOCK"*
WORM GEAR WINCHES

3 Models-Up to 6000-lbs. capacity



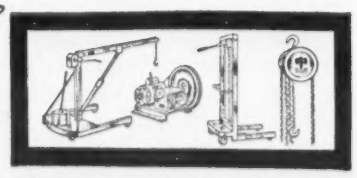
Exceptional quietness and ease of operation are built-in features of these compact worm gear winches. Gears are fully enclosed . . . protected from dirt, moisture and excessive wear. Gear case can be filled with oil or grease.

*Automatically self-holding (AUTO LOCK) in any position. Recommended for raising-lowering, opening-closing, or pulling applications where loads remain suspended—such as lighting fixtures, skylights, bleachers, heavy doors, dumb waiters, boat lifts and many other indoor and outdoor needs.

High strength heat treated machine cut gears; one-piece cast iron drums, adjustable steel handles. Available in three models—1500 lb., 2500 lb., and 6000 lb. For vertical or horizontal mounting.

Write for FREE catalog listing specifications.

Thern MACHINE COMPANY
3800 4th Street
Winona, Minnesota



For more details circle NED-773 G1 on enclosed inquiry slip

new... super-sensitive TESTMASTER®

Min. Grads. .00005"

— 40% less gaging pressure
— 25% less friction
— .0001" grads. model also available

Write for brochure and prices

FEDERAL PRODUCTS CORP.
1177 Eddy Street, Providence 1, Rhode Island

Ask FEDERAL® First

for recommendations in modern gages... Dial Indicating • Air • Electric or Electronic — for inspecting, measuring, sorting, or automation gaging.

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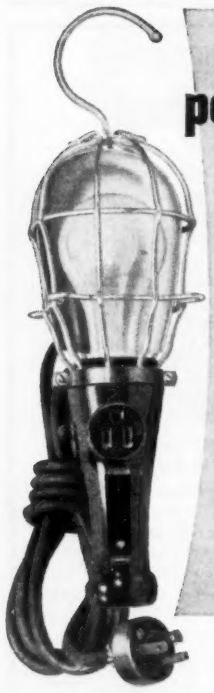


McGill grounded portables protect against shock

Provide grounded power outlet

McGILL grounded portables provide positive protection and are built to take the abuse of rough service. Their exclusive grounding design insures safety against shock that is not found in ordinary guards when insulation wears through, wires short internally or the guard contacts exposed wires. Built for 3 wire cord and 3 blade plug. Built-in extension outlet for 2 parallel blades and a 3rd U shaped blade for ground. Impact resistant molded phenolic handles, extra heavy wire cages and famous LEVOLIER switch. Switch and cord optional.

Available from Electrical Wholesalers.

Send for McGILL Catalog No. 84.

No. 5025 SRG
- UL Inspected
- Conforms to NEC
- Grounding adapted as Standard by ASA

engineered electrical products
McGILL®
precision needle roller bearings

McGILL MFG. CO. INC., Electrical Div., 151 N. Campbell St., Valparaiso, Ind.

▲ For more details circle NED-775 G1 on enclosed inquiry slip ▲

NEW MATERIALS AND PROCESSES

MEDICATED LOTION protects hands from chemicals

Balmex medicated lotion is designed to protect the hands of industrial workers handling irritating chemicals or other aggravating materials. It is composed of Lano-Sil, a nonsensitizing, dewaxed, moisturizing fraction of lanolin, hexachlorophene, Allantoin, Balsam Peru, and silicone. It returns natural oils to the skin and minimizes skin irritation. It is also usable for relief of minor burns and insect bites. • **Macsil, Inc.**, "A" Street & Lehigh Avenue, Philadelphia, Pa.

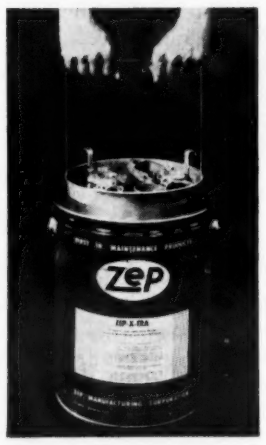
▲ For more details circle NED-777 G1 on enclosed inquiry slip ▲

FLAMEPROOF BARRIER MATERIAL can be flat punched or formed

In 0.062-in. thick sheets, Duroid 100FR flameproof mechanical and electrical barrier material extinguishes itself instantly according to the UL vertical test. The 0.031-in. material is self-extinguishing in 6 sec. In addition to its flame resistance, this material is rigid, firm, and resilient and has high tensile and bursting strengths. It is available in sheet or fabricated forms in 0.031 to 0.125-in. gages. • **Rogers Corp.**, Rogers, Conn.

▲ For more details circle NED-778 G1 on enclosed inquiry slip ▲

PARTS CLEANING SOLVENT removes dirt and grease safely



Zep-X-Tra is a blend of solvents and grease emulsifiers which is designed for fast, safe cleaning of small metal parts such as carburetors, air and hydraulic cylinders, bearings, and assemblies. Parts are placed in basket which is immersed in cleaner can. The lower layer dissolves and suspends oil and grease type surface soils, and the upper layer acts as a liquid seal to retard evaporation and maintain solution strength. It is harmless to metal, provides corrosion protection, is nonflammable, and can be reused. • **Zep Mfg. Corp.**, 560 Edgewood Ave. N.E., Atlanta 12, Ga.

▲ For more details circle NED-779 G1 on enclosed inquiry slip ▲

FLEXIBLE HEAT

with new flexible

SILICONE RUBBER HEATERS

Light weight, flexible, only .050" thick.
Teflon leads standard, other types on request.
Can be rated at any wattage or voltage.
Varied heat distribution pattern possible. They are water resistant and easily applied to any plane surface.

Write For Bulletin C-102.

WATLOW
ELECTRIC MFG. CO.
1374 Ferguson Ave. • St. Louis 14, Mo.
Cartridge • Strip • Immersion • Tubular
Cylindrical Electrical Heating Units

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YOU GET MORE WITH A MILLER

Exploiting the full potential of better basic design, the Miller Gold Star 300 series ac-dc welders convert in minutes from the prime ac-dc welder of exceptional performance to any of these three a-c applications: Metallic Arc, manual or automatic Inert Gas; or, to any of the following d-c applications: Metallic Arc, manual or automatic Inert Gas, or Inert Gas spot welding.

It's important to note that the Miller conversion kits utilized to obtain any of the above simply *extend* the built-in superiority of the 300 series' welding characteristics into the type of application desired. It's adaptable by design—*not* accident.

Available in 200, 300, 400 and 600 ampere models, all feature the exclusive Miller transformers and semi-metallic rectifiers. Complete specifications, including duty cycle chart, will be sent promptly upon request.

Also available on request are two new booklets: "A Full Line of Fine Welders" and "Questions and Answers on Rectifiers for Welding."

MILLER ELECTRIC MANUFACTURING COMPANY • APPLETON, WISCONSIN

Distributed in Canada by Canadian Liquid Air Co., Ltd., Montreal

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Gentlemen: Please send me without cost or obligation your new catalog, No. 1000, on the complete Norgren line of pneumatic products.

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C. A. NORGREN CO.
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ENGLEWOOD, COLORADO

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SH RT RUN STAMPINGS

SAVE MONEY TIME AFTER TIME!

Designed for the "get-up-and-go" business, WLS Speedtooling works in limited time to produce close tolerance stampings at a fraction of the cost employed by old-fashioned methods.

Find out why more and more of the country's leading manufacturers are turning to the skilled craftsmen and the newest machinery at WLS to turn out their stampings... speedily and economically!

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For those manufacturers who are faced with manufacturing problems, we offer a free bulletin illustrating many stampings we have produced, as well as a sample and cost summary of an actual part. We also offer free quotations from your blueprints at any time.

COMPLETE FACILITIES
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WLS STAMPING COMPANY

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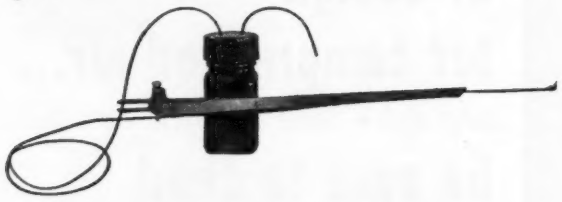
For more details circle NED-782 G1 on enclosed inquiry slip

ARCCO CANNON NEVER-DRY PEN

Writes for Months



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Regardless of pulsations or other causes of ink failures this new Never-Dry Pen will make clean and complete records. Ink supply lasts for several months without refilling reservoir. Capillary tube from ink bottle placed in instrument case feeds pen with continuous flow. Closed system sealed from atmosphere prevents clogging and dirt accumulation.

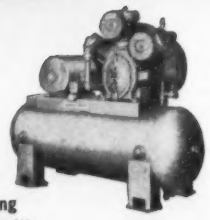
Weight of pen is constant at all times thus insuring extreme accuracy. No slopping or dripping. Stainless steel construction—no corrosion. When ordering, specify make and type of recording instrument.

$6.90 each Net
Send for quantity prices

ARCCO INSTRUMENT COMPANY, INC.
7144 EAST CONDOR STREET · LOS ANGELES 22, CALIF.
MANUFACTURERS OF PRECISION INSTRUMENTS

For more details circle NED-783 G1 on enclosed inquiry slip

AMPLE AIR is always there... with TYPE 30 AIR COMPRESSORS



Ingersoll-Rand "packaged" Type 30 Compressors are top choice among men who look for dependability combined with low-cost maintenance and maximum efficiency.

- Stainless steel valving
- Individual cylinders with micro-honed walls
- Finned copper intercoolers
- Four-ring piston design
- Totally enclosed centrifugal unloader
- Single and two-stage units —½ to 20 hp

Get the facts on features and performance! Write today for latest literature on Ingersoll-Rand Type 30 Air-Cooled Compressors or see your local I-R representative or distributor.

Ingersoll-Rand
94A-3 11 Broadway, New York 4, N. Y.

For more details circle NED-784 G1 on enclosed inquiry slip

NEW LITERATURE and CATALOGS

Silicon Diffused Rectifiers

FREE Raytheon Co., Semiconductor Div.—Illustrations and mechanical and electrical specifications of over 150 different silicon diffused rectifiers are contained in 6-page Bulletin SP-7660. Units range from 50 to 600 v PIV and from 250 ma to 22 amp.

For more details circle NED-785 G1 on enclosed inquiry slip

Maintenance, Safety & Production Equipment

FREE Martindale Electric Co.—64-page 1961 Catalog is descriptive of 110 different products such as rotary burs and files, metal-cutting saws, test instruments, electric etchers, and a complete line of electric motor maintenance devices. Maintenance, safety, and production procedures are detailed.

For more details circle NED-786 G1 on enclosed inquiry slip

Marking Tools, Fixtures & Machines

FREE M. E. Cunningham Co.—48 pages of Mecco safety marking equipment Catalog 300 cover over 20 type holders, 12 styles of steel stamps, press type holders, press stamping and embossing dies, coding type and holders, rolls and dies, G-R-D marking fixtures, and special fixtures and machines. Included are fully automated marking machines.

For more details circle NED-787 G1 on enclosed inquiry slip

Floodlighting Made Easy!

FREE Crouse-Hinds Co. — Quick-reference guide for selecting incandescent or mercury floodlights in general purpose or heavy duty types is provided by Bulletin 2719. Determining how many floodlights are needed and planning the lighting for various types of open areas are covered. Foot-candle charts and installation diagrams complete the illustrated bulletin.

For more details circle NED-788 G1 on enclosed inquiry slip

Multipurpose Lamps

FREE Luxo Lamp Corp.—Incandescent, fluorescent, combination, and magnifying lamps for use over assembly and inspection benches, machinery, drafting tables, office equipment, and in laboratories are described and illustrated in 4-page Catalog 116. Different lengths and colors are offered with brackets, bases, and stands, all UL and CSA approved.

For more details circle NED-789 G1 on enclosed inquiry slip

Multiple Lamp Indicators

FREE Dialight Corp. — Tele-Strips are telephone light strips or multiple lamp indicators that may embody from 2 to 20 lampholders, equipped with any of several styles of lens cap assemblies. They require illumination by T-2 lamps and are described in illustrated Bulletin L-164 of 8 pages.

For more details circle NED-790 G1 on enclosed inquiry slip

Coal Preparation Manual

FREE McNally Pittsburg Mfg. Corp. — Coal Preparation Manual No. 561 is a 156-page pocket-size guide that includes descriptions of a complete line of coal preparation equipment as well as engineering data and reference tables on the subject.

For more details circle NED-791 G1 on enclosed inquiry slip

Precision Switches

FREE Guardian Electric Mfg. Co.—16 pages of quick-reference data on a wide variety of Guardian switches including leaf, snap-action, cam, roller, coil, bifurcated, pushbutton, and special assemblies are contained in Catalog E. Dimensional drawings of all components are included.

For more details circle NED-792 G1 on enclosed inquiry slip

How to Move Granular Materials

FREE Fort Worth Steel & Machinery Co.—Catalog Section 480 is entitled "The Fort Worth Speed Loader Engineering & Specification Guide." Five types of this equipment are adaptable for distributing grain, coal, fertilizer, and a wide variety of other free-flowing dry bulk materials in granules or lumps up to 2-in. diameters.

For more details circle NED-793 G1 on enclosed inquiry slip

Brushing Tools for Industry

FREE M. W. Jenkins' Sons, Inc.—"Brushing Tools for Industry" is the title of a 20-page guidebook which explains the advantages obtainable with quality brushing tools. Available types, where and how they are used, and typical hand and power wire and bristle brushes are discussed.

For more details circle NED-794 G1 on enclosed inquiry slip

Williams Bronze FM Safety Gas Control Cock

Factory Mutual Approved Design

Fig. 1296

Open burner cocks and delay in applying the lighting torch in multi-burner, gas-fired industrial furnaces, ovens, dryers and boilers can cause explosions. You can protect against this liability now with the unique design of the Williams Safety Gas Control Cock. It is specifically intended for manufactured, natural propane and butane gases up to 50 lbs maximum operating pressure. This valve is a real "Guardian of the pipe line".

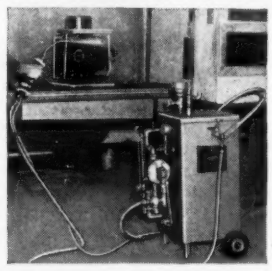
Write now for information to American-Standard Controls Division, 5900 Trumbull Ave., Detroit 8, Michigan.

AMERICAN-Standard CONTROLS DIVISION

For more details circle NED-795 G1 on enclosed inquiry slip

"PANTEX SPEEDYLECTRIC SOLVED OUR PROBLEM!"

Says Mr. Joseph Bushee of Jet Spray Cooler, Inc.



CLEANING FLUX FROM COMPRESSORS IN JET-SPRAY COOLER PLANT

Intensive factory testing of hermetic refrigeration systems in the Jet-Spray beverage cooler plant at Waltham, Massachusetts, did not always detect flux-plugged pinholes in soldered joints. Costly leaks showed up later as operation or shipping vibration loosened the flux — NOW A Speedylectric Steam-Jet Cleaner quickly blasts away the flux, even out of tiny pinholes . . . final testing discloses potential defects to be corrected.

Ask for Bulletins JC—100 and SG—300.

Pantex Manufacturing Corporation
SPEEDYLECTRIC DIVISION
P. O. BOX 660N
PAWTUCKET, RHODE ISLAND

For more details circle NED-796 G1 on enclosed inquiry slip

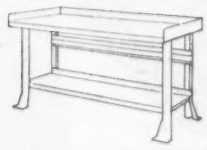
PARENT WORK BENCHES

THE LARGEST SELECTION OF STANDARD SIZE WORK BENCHES AVAILABLE FROM ONE SOURCE

Locker Base Work Bench illustrated here, is one of the many various type Locker Base, Cabinet Base, Leg Base, and Stake Base Benches available from PARENT. Model shown, is 72" long, 24" deep, 32¾" high, and has laminated maple top; all steel base, with 8 box lockers.

• No. 72-24-408 B

Be sure to check PARENT'S line of QUALITY WORK BENCHES, before your next purchase of bench equipment. PARENT'S complete line permits you to choose just the right bench to suit your individual requirement, and at a price you'll like. There's a PARENT work bench to fit EVERY NEED . . . . and EVERY BUDGET.



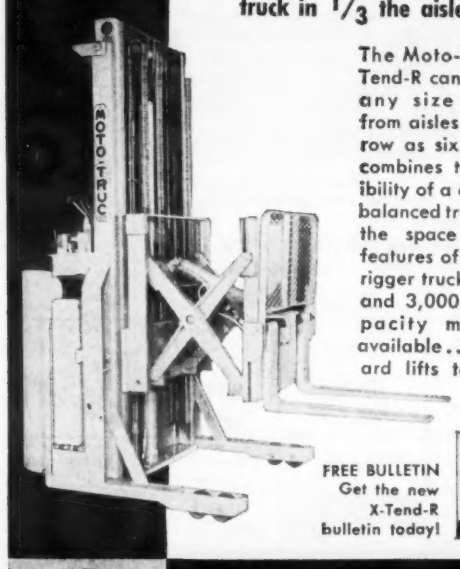
FREE CATALOG available, covering the most complete work bench line on the market. Send for your copy today.

PARENT METAL PRODUCTS INCORPORATED
6801 STATE ROAD DEPT. 25 PHILADELPHIA 35, PA.

For more details circle NED-797 G1 on enclosed inquiry slip

NEW... MOTO-TRUC X-TEND-R

... all the flexibility of a fork truck in 1/3 the aisle width



The Moto-Truc X-Tend-R can handle any size pallet from aisles as narrow as six feet. It combines the flexibility of a counter-balanced truck with the space saving features of an outrigger truck. 2,000 and 3,000 lb. capacity models available... standard lifts to 130"

FREE BULLETIN Get the new X-Tend-R bulletin today!

The MOTO-TRUC Company
12415 TAFT AVE. • CLEVELAND 8, OHIO

For more details circle NED-798 G1 on enclosed inquiry slip

JIFFY PADDED SHIPPING BAGS

SO EASY TO PACK!

JIFFY PADDED SHIPPING BAG — the all-in-one shipping unit — provides cushioning, moisture-resistance, insulation, and heavy duty protection. Saves labor, time and materials. Handy tear-tape opener for easy removal of contents.

SO SIMPLE TO OPEN!

Send for your FREE SAMPLES today!

JIFFY MANUFACTURING COMPANY
360 Florence Avenue Hillside, N. J.

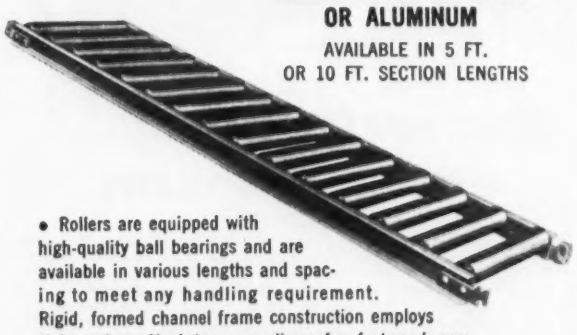
For more details circle NED-799 G1 on enclosed inquiry slip

AUTO-Glide

STANDARD DUTY ROLLER CONVEYERS

CONSTRUCTED OF STEEL OR ALUMINUM

AVAILABLE IN 5 FT. OR 10 FT. SECTION LENGTHS



• Rollers are equipped with high-quality ball bearings and are available in various lengths and spacing to meet any handling requirement. Rigid, formed channel frame construction employs Universal or Hook-type couplings for fast and easy assembly. For further information write for Catalog MSP-G1-61 to Mathews Conveyer Company, Standard Products Division, Ellwood City, Pa.

MATHEWS
DISTRIBUTORS LOCATED IN PRINCIPAL CITIES

For more details circle NED-800 G1 on enclosed inquiry slip

NEW MATERIALS AND PROCESSES

ALUMINUM FOIL & SHEET TRIM
various designs have adhesive back

Appearance of many types of products can be enhanced by use of this multicolored aluminum foil and sheet trim with pressure - sensitive adhesive backing. Any combination of colors, all permanently anodized into the aluminum, is available in a wide variety of designs, a few of which are shown. Stock and custom designs are available in sheet or strip form. Trim can be embossed, preformed, or cut to shape. Designs to specifications can be produced. Samples are available when requested on company letterhead. • **Anodyne, Inc.**, 1270 N. W. 165th St., North Miami Beach 69, Fla.

For more details circle NED-801 G1 on enclosed inquiry slip

TEFLON SHEET
in 1/32 to 1/4-in. thick, 4 x 8-ft size

Teflon in 4 x 8-ft sheet is now available in thicknesses of 1/32, 1/16, 1/8, 3/16, and 1/4 in. Tolerances are maintained to ±0.004 in. on the first three thicknesses, to ±0.008 in. on 3/16-in. sheets, and to ±0.010 in. for 1/4-in. sheets. Teflon tape up to 48 in. wide is also offered in thicknesses of 0.010, 0.015, 0.020, and 0.030 in., whereas tapes in widths to 24 in. are available in these as well as other thicknesses. • **John L. Dore Co.**, 8919 Colleen, Houston 24, Tex.

For more details circle NED-802 G1 on enclosed inquiry slip

DUCT INSULATION
has high rigidity and strength

Improved E-Z Ply mineral fiber duct insulation is available plain and with black kraft paper vapor barrier bonded with asphalt, scrim-reinforced aluminum foil laminated with flameproof kraft paper, embossed aluminum foil, or neoprene backing. It is two and one-half times stronger and three times more rigid than the previous insulation. Thermal conductivity is 0.24 at a mean temperature of 75° F; its maximum limit is 450° F. Panels of 2 x 4 ft are made in 1, 1½, and 2-in. thicknesses for cutting by knife and application by conventional methods. • **Baldwin-Ehret-Hill, Inc.**, 500 Breunig Ave., Trenton 2, N. J.

For more details circle NED-803 G1 on enclosed inquiry slip

AUTO-Glide

PORTABLE BELT CONVEYERS

PROVIDE LOW-COST TROUBLE-FREE PORTABLE PACKAGE HANDLING

MODEL WC-100

• Available in suitable sizes and capacities for loading and unloading. Model WC-100 employs spring-loaded raise and lower mechanism for instant adjustment. Constructed of rigid, welded tubular steel. Roller chain drive assures positive flow of boxes, bags, cartons, cases or crates as high as 30- degree incline. For further information write for Bulletin PB 860 to Mathews Conveyer Company, Standard Products Division, Ellwood City, Pa.

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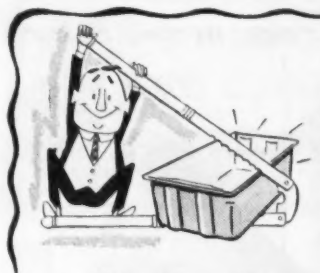
DISTRIBUTORS LOCATED IN PRINCIPAL CITIES

For more details circle NED-804 G1 on enclosed inquiry slip



WON'T SHATTER
WON'T ROT
WON'T DENT
WON'T RUST
WON'T WARP

Stack-n-Nest® Tote Pans

PATENTED 2,823,828 2,823,829

Lewis FIBER GLASS
reinforced polyester

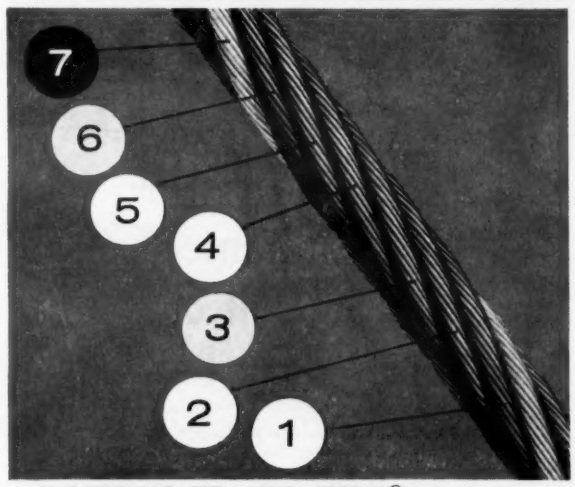
SIZES	COLORS
16 x 10 x 5	RED
18 x 12 x 6	
18 x 12 x 8	GREEN
22 x 14 x 5	
22 x 14 x 8	GREY
22 x 17 x 10	
27 x 16 x 11	
39 x 19 x 14	
34 x 24 x 19	

They stack and nest in their own dimension

No mechanical gadgets or space wasting cross-stacking. These pans stack straight, firm, and high . . . possible only with the exclusive Lewis "contour offset" design. Heat pressure molded in one piece of mighty Fiber Glass.

G. B. LEWIS COMPANY • 407 Montgomery St. • Watertown, Wis.

For more details circle NED-805 G1 on enclosed inquiry slip



NEW 7-FLEX® makes important savings on most wire-rope applications

All-new Macwhyte 7-strand rope is flexible as 8-strand — rugged as 6 x 19 — fatigue-resistant like 6 x 37. You'll get longer rope life, lower costs. Ask any Macwhyte distributor. Write for Bulletin 60100-R.

MACWHYTE Wire Rope COMPANY
2900 Fourteenth Avenue, Kenosha, Wis.
WIRE ROPE MANUFACTURING SPECIALISTS SINCE 1896

For more details circle NED-806 G1 on enclosed inquiry slip

AUTO-Glide

WHEEL CONVEYER SECTIONS

FURNISHED IN 12", 18" and 22" WIDTHS 5' and 10' LENGTHS

• Available with either steel or aluminum construction. Sections are rigidly crossbraced and fitted with Universal or Hook-type couplings. Choice of 10 or 12 wheels per foot in 12" width standard sections . . . 12, 16 or 20 wheels per foot in 18" width; 16, 20, 24, 28 in 24" width. Zinc coated steel or aluminum wheels. Frames are 2-½" formed channel. For further information write for Catalog MSP-G1-61 to Mathews Conveyer Company, Standard Products Division, Ellwood City, Pa.

MATHEWS
DISTRIBUTORS LOCATED IN PRINCIPAL CITIES

For more details circle NED-807 G1 on enclosed inquiry slip

Handiest TOOL IN THE PLANT!

CLEMENTS Cadillac® BLOWER-SUCTION CLEANERS

Portable — versatile — economical. Simplest, quickest way to clean motors, machinery and other equipment. Pays for itself in any plant. Ask your dealer for a demonstration.

4 BLOWER-SUCTION MODELS ...including powerful Model HP with 2-speed motor for double duty. Easy starting at low speeds prevents blowing of fuses. All models available with attachments for handling many special tasks.

HANDLES 101 CLEANING JOBS Blows dust, grit, chips and filings from hard-to-reach places. Use it as a suction cleaner for all kinds of jobs, or even to salvage bits of rare metal. Other models for annealing, soldering, and for preheating for bending.

BLOWER DIVISION | **CLEMENTS MFG. CO.** 6627 S. Narragansett Ave., Chicago 38, Ill.

SINCE 1910 Specialists in Quality Cleaning Equipment

For more details circle NED-808 G1 on enclosed inquiry slip

GOT A CUTTING PROBLEM?

We Guarantee to Solve it or Your Money Back!

Tell us your problem and we'll send you the right saw or cutting tool. Use it for one month's free trial, then, if not satisfied, return the tool at our expense. We make this offer only because Huther products are of the finest quality and because we can specify the right tool for your application. Write, or phone collect.

If it's wood, metal, plastic, paper or textiles.

"We Can Cut It"

Huther Bros. Saw Mfg. Co. Inc.
1290 University Ave. • Rochester 7, N. Y.

For more details circle NED-809 G1 on enclosed inquiry slip

At Last... Positive Protection Against Paint Spray

Ideal for Hot Weather Use!

New Efficiency The sensational new FLEX-A-PRENE Paint Mask keeps out paint pigments and solvents with amazing efficiency, yet it's light (just 1 ounce), comfortable and so easy to talk and breathe through you hardly know you're wearing it.

New Economy FLEX-A-PRENE's low first cost is only part of the story. Most important savings come from its endurance in service and time saved through less frequent filter replacements. You can expect at least 100 hours of exposure before filter replacement is necessary.

Sample: $1.50 postpaid (INDUSTRIAL PRICE ONLY)

FLEXO Products, Inc. Westlake, Ohio

For more details circle NED-810 G1 on enclosed inquiry slip

NEW LITERATURE and CATALOGS

How to Design Investment Castings

FREE Midwest Precision Castings Co.—A highly informative pocket-size booklet, the revised second edition of "How to Design Precision Investment Castings" is a guide for metalworking executives and design engineers on the benefits and limitations of the "lost wax" investment casting process. Included are design data as well as a materials chart listing physical properties and uses of some of the more popular metals.

For more details circle NED-811 G1 on enclosed inquiry slip

Properties of Commercial Glasses

FREE Corning Glass Works—Expanded data on corrosion resistance and thermal expansion of 32 commercial glasses are major additions to revised Bulletin B-83, entitled "Properties of Selected Commercial Glasses." Included are standard sections on mechanical, electrical, and optical properties; thermal stress; heat transmission; and viscosity of the various glasses.

For more details circle NED-812 G1 on enclosed inquiry slip

Oil-Fired Unit Heaters

FREE PowRmatic Inc.—8-page Catalog UH contains descriptions, specifications, typical installations, piping arrangements, and design and performance data on a complete line of oil-fired unit heaters. Outputs range from 80,000 to 140,000 Btu/hr.

For more details circle NED-813 G1 on enclosed inquiry slip

Collet Fixtures

FREE Zagar, Inc.—All models of Zagar collet fixtures for holding parts rigidly for milling, drilling, tapping, grinding, and threading operations are described in 8-page bulletin. Included is a vertical-horizontal holding fixture, a collet lathe chuck, an air-operated holding fixture, and a collet holding turntable fixture.

For more details circle NED-814 G1 on enclosed inquiry slip

Small Electro-Mechanical Devices

FREE Autotronics Inc. — Dimensional data and specifications are provided in 40-page handbook on electro-magnetic clutch-brakes, mechanical clutches, torque indicators, torque standards, and multispeed transmissions. Data covers 354 standard clutch-brake units. Other features of handbook include a torque conversion chart and instructions on inspection and response time measurement.

For more details circle NED-815 G1 on enclosed inquiry slip

Cold Finished Steel Bars

Intended as a reference text for steel warehousing industry personnel, 68-page book "The Story of Cold Finished Steel Bars" by F. R. Robbins, president of Bliss & Laughlin, Inc., provides helpful material for engineers and others engaged in manufacture and use of steel. Aptly illustrated with cartoons, book covers bar finishing, plasticity, crystallization, deformation, alloys, hardenability, thermal treatments, free machining stocks, alloys and processing, and where-to-use information. Available only by writing on company letterhead to **Bliss & Laughlin, Inc.**, Harvey, Ill.

For more details circle NED-816 G1 on enclosed inquiry slip

Manufactured Abrasives Blasting

FREE Norton Co.—"Special Report on Pressure Blasting with Manufactured Abrasives" describes the areas of application for pressure blasting and the various media used. Charts and drawings provide useful operation information and procedures for popular types of media and equipment.

For more details circle NED-817 G1 on enclosed inquiry slip

Art Metalcraft

The 1961 16-page Craftool Catalog 61 MC "Art Metalcraft" covers a range of items, including jewelry making equipment, tools, and centrifugal castings; buffing wheels and compounds; and polishing accessories and wheels. Available only by writing on company letterhead to **Craftools Inc.**, 396 Broadway, New York 13, N. Y.

For more details circle NED-818 G1 on enclosed inquiry slip

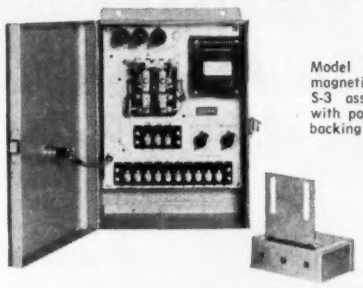
Valve Reference Booklet

FREE Ohio Brass Co.—Pocket-size 16-page reference booklet furnishes condensed listing of standard and low pressure gate, globe and angle, check, and special valves. It contains figure number comparison charts, application and installation tips, and other pertinent information.

For more details circle NED-819 G1 on enclosed inquiry slip

For more details circle NED-820 G1 on enclosed inquiry slip

NEW PROXIMITY CAN LINE CONTROL



Model 800-XP3 Amplifier with magnetic sensing head Model S-3 assures a full cable line with positive prevention of cans backing into infeeding equipment.

OTHER AUTOMATION CONTROLS FOR CANNERS AND CAN PRODUCTION

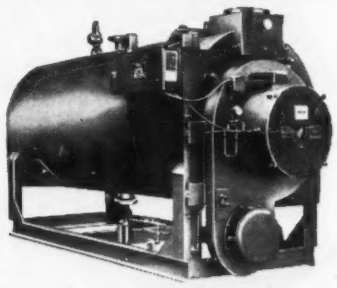
- Double sheet detector & coil stock gage
- Coil stock dull plate detector
- Aerosol can top split curl detector
- Can body maker reverse litho detector
- Transistorized counters & amplifiers
- Special controls engineered & produced

Write for amplifier specification chart and descriptive bulletins

DE-TEC-TRONIC CORPORATION
2510 NORTH HALSTED STREET, CHICAGO 14, ILLINOIS
MFG. ELECTRONIC INDUSTRIAL CONTROLS
MEMBER CHICAGO ASS'N OF COMMERCE AND INDUSTRY

For more details circle NED-821 G1 on enclosed inquiry slip

$ savers!



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Phoenixville, Pennsylvania

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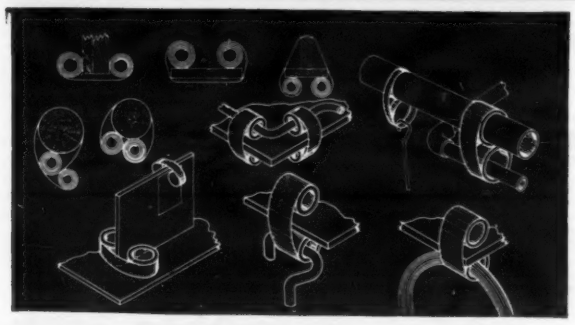
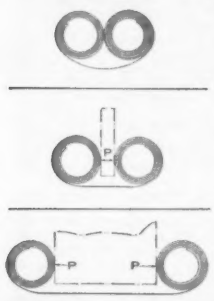


SELF-ADJUSTING CLAMP



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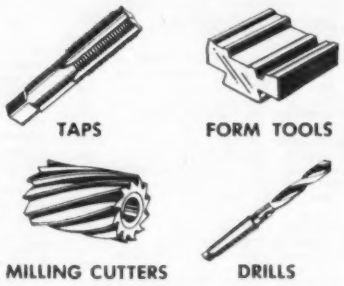
NEW MATERIALS AND PROCESSES

STEEL HARDENING PROCESS
treats high speed steel tools

Higher hardness and toughness factors obtained with the Sunite steel treating process frequently result in doubled or tripled tool life. It reportedly increases the Rockwell C hardness of any high speed steel up to 2 points while uniformly hardening it from surface to center. Cutting tool brittleness is almost completely overcome. Tests have shown increased tap life on cast iron parts from 10 to 40-43 holes per tap before scrapping, and an increase from 225-250 to 1500 pieces per grind using a T-15 dovetailed form tool. Although developed for precision hardening of taps, form tools, millers, cutters, drills, reamers, broaches, hobs, and other cutting tools, the process can be used for hardening of mass-produced component parts. • **Sun Steel Treating, Inc.**, 24485 Middlebelt Rd., Farmington, Mich.



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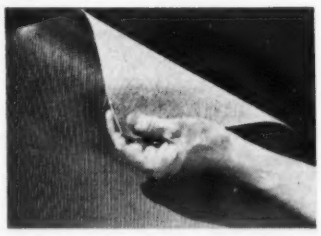
ANTISEPTIC HAND CLEANER
packaged in aerosol dispenser

Possibility of secondary infection from minor cuts or scratches or infectious dermatitis from oils is minimized by an antiseptic ingredient in Ren hand cleaner. It has a wintergreen scent and helps to condition the hands and prevent dry skin. Grease, plastic, resin, hardener, paint, tar, tile cement, ink, pigments, dyes, and adhesives are among the soils it quickly and safely dissolves. The 12-oz aerosol package discourages waste and prevents spilling. • **Ren Plastics, Inc.**, Dept. RP-95, 5422 S. Cedar Rd., Lansing 9, Mich.

▲ For more details circle NED-827 G1 on enclosed inquiry slip ▲

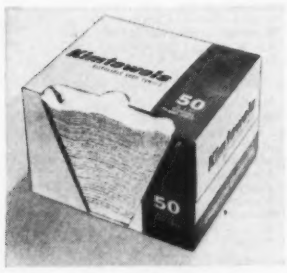
VINYL MATERIAL
for flooring, surface protection



Unusually durable vinyl material was originally developed as a floor covering for automobiles. Also usable as flooring in plants, as product finish, as mats and runners, and for other purposes, it is a plasticized semirigid synthetic resin securely adhered to a cotton lining. It is 0.045-in. thick, weighs approximately 32 oz per sq yd, and is flexible enough to be supplied in rolls, but is not recommended for bending around small radii. Rolls range from 36 to 52 in. wide in lengths from 25 to 250 yd. A wide range of colors and embossed textures is available. Material can be bonded to metal, wood, and other materials. • **Barley-Earhart Corp.**, Portland, Mich.

▲ For more details circle NED-828 G1 on enclosed inquiry slip ▲

DISPOSABLE TOWELS
13 x 15-in. size is reusable



Lint-free Kimtowels have high tensile strength and quick absorbency, and are suited for such uses as wiping bearings, cleaning gears, polishing gages, and soaking up oil spillage. Saturated with solvent, they are used to clean machine tools or pick up chips and shavings. The 13 x 15-in. towels can be reused several times before disposal. Costing about 1 cent each, they are packaged in quantities of 50. Metal dispensers are available. • **Kimberly-Clark Corp.**, Industrial Products Div., Commercial Street, Neenah, Wis.

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SIMPLEX SCREW JACKS

SCREW JACKS 4-WAY HEAD —19 MODELS
10 to 24 tons capacity. Ball bearing. Malleable Housing. Safety peep hole.

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20 to 24 tons capacity for close-quarter operation.

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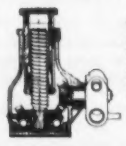
PLANER JACKS —5 MODELS
2 to 8 tons capacity. 2¾" to 7" high. 1" to 4½" Lift. Swivel head & lock screw.



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8 models, three with aluminum alloy housings. 15 to 50 tons capacity.

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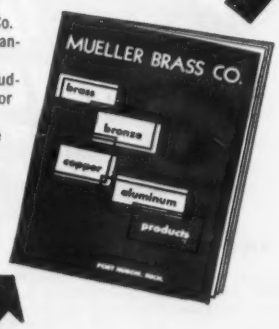

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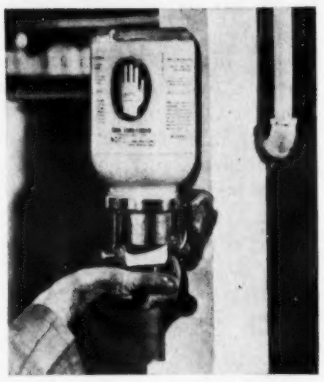
NEW MATERIALS AND PROCESSES

SKIN PROTECTION PROGRAM aims to reduce dermatitis problems



A program to reduce dermatitis, skin irritations, and other skin problems in the plant is being offered by this company which manufactures skin conditioning water-rinse and waterless skin cleansers. Results of the program are reported to be minimum absenteeism, low employee turnover, and few compensation cases. An introductory kit that meets the hand-cleansing needs of four workers is offered for 30-day evaluation. • **Indco Lab, Inc.**, 1669 Euclid St., Santa Monica, Calif.

▲ For more details circle **NED-835 G1** on enclosed inquiry slip ▲

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Made with both silicones and glass fiber, Silverleaf aluminum roof coating produces a lightweight, durable layer over all types of roofs, except wood shingle. The bright aluminum finish waterproofs by sealing leaks from the weather and insulates by reflecting the sun's rays to reduce roof temperature and air conditioning load. Coating may be brush or spray applied, with coverage up to 100 sq ft per gallon, depending upon the type of roof coated. • **Pace Products, Inc.**, 1609 Washington St., Kansas City 8, Mo.

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Corrosion, abrasion, and weather resistant properties are reported for Tenaco two-part industrial protective coating, a modified epoxy type. The number of coats required depends upon the surface to be coated. Two coats usually produce a high gloss finish on smooth, nonporous surfaces without baking. The two components are combined just prior to application and have a usable life of at least 24 hr after mixing. Equal portions are easily measured, as they are packaged in a "twin-tainer" for simultaneously pouring when both caps are removed. Application is by spray, brush, or roller. Finish dries dust-free in 30 min, dry enough for sanding in 8 hr, and has its maximum chemical resistance in 7 days. Twenty basic colors plus clear are available in gloss or satin finish and may be intermixed. Forced drying is possible. • **Tuffy Products, Inc.**, 1200 Mendelssohn Ave. N., Minneapolis 27, Minn.

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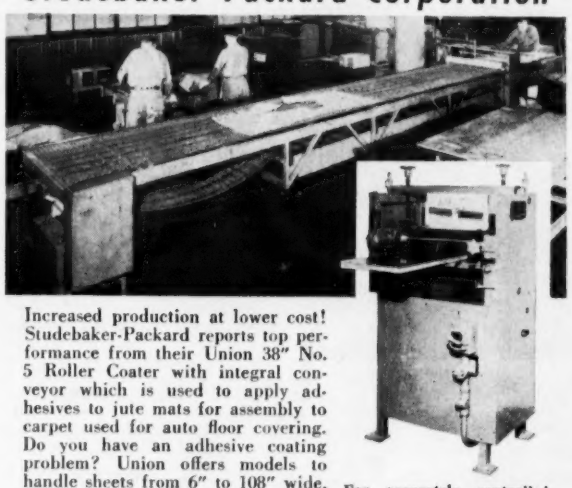
Union Roller Coater cuts costs, provides method improvement at Studebaker-Packard Corporation



Increased production at lower cost! Studebaker-Packard reports top performance from their Union 38" No. 5 Roller Coater with integral conveyor which is used to apply adhesives to jute mats for assembly to carpet used for auto floor covering. Do you have an adhesive coating problem? Union offers models to handle sheets from 6" to 108" wide, variable thicknesses, coating one or both sides, either or both edges, continuously or intermittently, automatically. Write us today!

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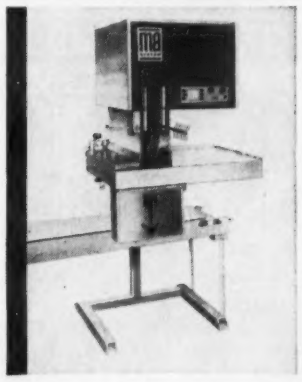
THE UNION TOOL CORPORATION
WARSAW, INDIANA

▲ For more details circle **NED-839 G1** on enclosed inquiry slip ▲

A new low-cost automated polyethylene packaging system



FUNCTION: Completely packages products in polyethylene film—in one operation—in your plant. Produces inexpensive loose or shrink-fit polyethylene packages around regular, odd-shaped or out-sized products of all types. **ADVANTAGES:** Uses polyethylene roll stock. Saves up to 50% on material costs over ready-made bags and other packaging methods and materials. • Boosts in-plant packaging efficiency, produces up to 30 packages per minute at reduced labor costs. • Provides a self-selling plain or printed package that protects, displays, reduces damages caused by excessive handling. • Simple to Operate—Easy to Maintain. **COST:** Complete MA Systems normally range from $2000 to $4000. **FREE OFFER:** Let the MA System test-package your product in durable, transparent polyethylene. Send us a sample, or write for complete details on this revolutionary packaging system to either: Mehl Manufacturing Company, 2057 Reading Road, Cincinnati 2, Ohio—or—Kordite Company, Macedon, New York.

ma SYSTEM

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For more details circle NED-841 G1 on enclosed inquiry slip

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FARRELLOY COMPANY

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For more details circle NED-842 G1 on enclosed inquiry slip

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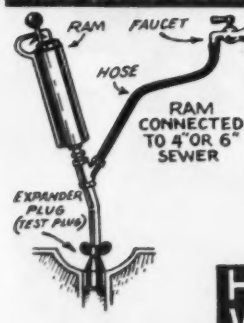

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Smashes through the most stubborn blockages, then flushes clean — all in one operation!

Comes equipped with self-contained manual compressor (can charge Ram to 100 lbs. in 30 seconds!) and drain adaptors in 6 sizes!

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138-5 Hurd Avenue Bridgeport 4, Connecticut

For more details circle NED-843 G1 on enclosed inquiry slip

NEW MATERIALS AND PROCESSES

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Virtually any material can be laminated to plywood or hardboard with Ankweld contact cement. Used in bonding plywood panels to wall studs, cement is so tenacious that plastic, linoleum, or aluminum laminations to plywood can be fed through a rotary saw immediately after assembly. It resists water, oil, gasoline and temperature extremes, and affords flexibility for application to curved surfaces. The two-surface adhesive is sprayed or brushed on, and materials can be joined any time between 10 min and 4 hr after application. Cement applied accidentally can be rubbed off when dry, leaving a clear, unstained surface. • **Anchor Adhesives Corp.**, 36-23 164th St., Flushing 54, N. Y.

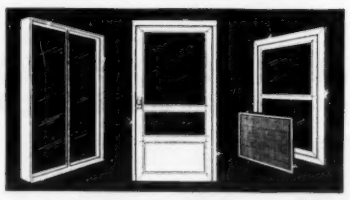
For more details circle NED-844 G1 on enclosed inquiry slip

METAL-CUTTING LUBRICANT has high wetting, cleaning ability

Straight oils can be replaced in most metal cutting and grinding operations by Vantrol 700, a water soluble compound that exhibits high lubricating, wetting, and cleaning abilities. Compound is said to be metallophilic because it has an affinity for metal. It forms a semi-opaque tan-colored emulsion that can be used on all types of metals, mixes readily in soft or hard water, affords resistance to rancidity, and is rust inhibiting. It poses no health or fire hazard in handling or storage and is highly viscous at room temperature. • **Van Straaten Chemical Co.**, 630 W. Washington Blvd., Chicago 6, Ill.

For more details circle NED-845 G1 on enclosed inquiry slip

COLORLESS ALUMINUM COATING prevents corrosion, discoloration



Bonderite 725 produces a colorless coating on aluminum with excellent bare corrosion resistance and a natural metallic appearance. Coating is also usable as a base for paint or clear lacquers. Attractive satin finishes can be obtained by prior treatment with an etching cleaner. Chemical forms a sludgeless solution for treating aluminum and its alloys by spray or immersion in four simple steps. Treatment cost is approximately 5 to 7 cents per 100 sq ft. • **Parker Rust Proof Co.**, 2177 E. Milwaukee Ave., Detroit 11, Mich.

For more details circle NED-846 G1 on enclosed inquiry slip

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POCKET COMPARATOR

6 Power Magnification

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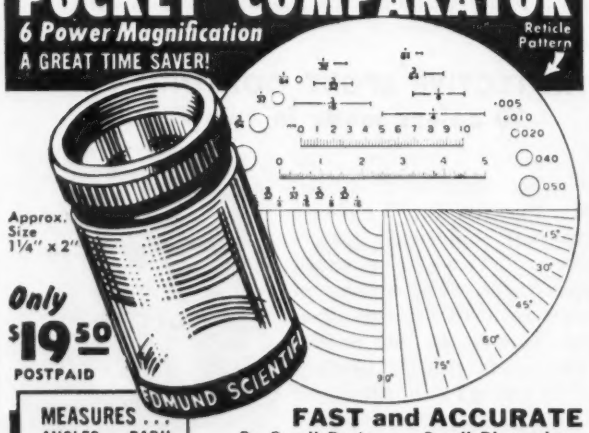

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COMPANIES WITH HIGH-COST GROUND-LEVEL LOADING PROBLEMS

Limited Dock Facilities? Ground Level Plant? Yard Loading? Outlying Railcars?

Problems? Not with a Magliner Mobile Loading Ramp on the job! A loading dock on wheels, Magliner Loading Ramps are quickly, easily moved where and when they're needed. Just one man, a power truck and a Magliner . . . and loads move in a steady cost-saving flow, *in any kind of weather*! Magliner's exclusive new non-slip grating tracks assure positive power truck traction—prevent slippage caused by snow, sleet, rain, oil, grease build-up, etc. Made of light, strong, magnesium, Magliners are ruggedly built for long-life service. Standard models load-rated up to 16,000 lbs . . . more if you need it.

WRITE TODAY FOR BULLETIN DB-211

"*Ground-Level Loading Problems and How to Solve Them.*"

MAGLINE INC.
P. O. Box 177
Pinconning, Michigan

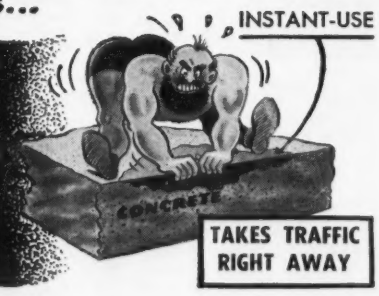
MAGLINER MOBILE LOADING RAMPS

For more details circle NED-849 G1 on enclosed inquiry slip

REPAIR FACTORY FLOORS WITH THIS...

INSTANT-USE

INSTANT SETTING PATCH!



TAKES TRAFFIC RIGHT AWAY

Repair broken factory floors without the usual traffic tie-up. Simply shovel INSTANT-USE into hole or rut — tamp smooth — truck over! No waiting! INSTANT-USE bonds tight to old concrete—right up to a feather edge. It's tough. Wears like iron. Won't crack or crumble. Install complete overlay where floors are badly chewed up. Used indoors or out. Immediate shipment! (No residential, please).

MAIL COUPON for FREE BROCHURE

INSTANT-USE

FLEXROCK COMPANY (Offices in principal cities)
3603 Filbert Street, Philadelphia 1, Pa.
Please send me complete INSTANT-USE Information and Free INSTANT-USE BROCHURE—no obligation. (Clip and attach Coupon to company letterhead.)

Name .....
Title .....
Company .....
Address .....

For more details circle NED-850 G1 on enclosed inquiry slip